Gone to Fiddler's Green: Reconnaissance and Security for the Corps

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The United States Army's transformation from the Army of Excellence design to the Modular design had profound changes for the corps organization. The pending transformation of the 3d Armored Cavalry Regiment to a Stryker brigade combat team raised the issue of a corps ability to conduct reconnaissance and security without a dedicated land-based organization. This study addresses a corps requirement to have a dedicated means to gather information and protect the force through the criteria of doctrine, capability and organization. The main findings indicated a corps need for a dedicated reconnaissance and security organization. The U.S. Army's experience in Cambodia in 1970 and Kuwait in 1991 demonstrated the importance of a reconnaissance and security organization to corps and divisions. Regardless of the terrain or weather conditions, the armored cavalry regiments located the enemy and developed the situation through contact. The Army's experience in Iraq in 2003 highlighted the impact a corps faced by operating without a reconnaissance and security force. Modular corps will face similar difficulties in shaping the battlefield for its subordinate units without a dedicated land-based reconnaissance and security organization.

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Abstract

GONE TO FIDDLER'S GREEN: RECONNAISSANCE AND SECURITY FOR THE CORPS by MAJ Brian C. Goings, U.S. Army, 56 pages.

The United States Army's transformation from the Army of Excellence design to the Modular design had profound changes for the corps organization. Armored cavalry regiments under the Army of Excellence design provided reconnaissance and security for corps. However, the pending transformation of the 3d Armored Cavalry Regiment to a Stryker brigade combat team fundamentally changed the way corps conduct reconnaissance and security. This change raised the issue of a corps ability to conduct reconnaissance and security without a dedicated land-based organization.

This study addresses a corps requirement for reconnaissance and security through the criteria of doctrine, capability and organization. The study uses the criteria to describe how Army doctrine shapes a corps requirement for a reconnaissance and security organization, the capabilities such an organization requires, and the actual organizational structure of the reconnaissance and security force the Army designed. The case studies for analysis are the II Field Force, Vietnam and 11th Armored Cavalry Regiment in Operation TOAN THANG 43; VII Corps and 2d Armored Cavalry Regiment in Operation DESERT STORM; and V Corps in Operation IRAQI FREEDOM. The first two case studies represent different eras in the U.S. Army's history which saw corps-sized formations employ a dedicated reconnaissance and security organization. These case studies establish the Army's previous experience with armored cavalry regiments against different enemies and on different types of terrain. The last case study, Operation IRAQI FREEDOM, addresses a corps operating without a dedicated reconnaissance and security organization. The set of criteria to analyze the case studies are doctrine, capability, and organization.

The main findings indicated the need for corps to have a dedicated reconnaissance and security organization. Although transformation in its final stages, the Army is still in a period of transition between the Army of Excellence and Modularity in terms of doctrine, organization, material, and leadership. The U.S. Army's experience in Cambodia in 1970 and Kuwait in 1991 demonstrated the importance a corps reconnaissance and security organization had during the execution of division and corps attacks. Regardless of the terrain or weather conditions, the armored cavalry regiments supporting division and corps-sized organizations, respectively, were able to locate the enemy and develop the situation through contact.

Furthermore, the Army's experience has also shown the consequences of corps operating without a reconnaissance and security force. A corps without a dedicated reconnaissance and security organization lacked the ability to gather detailed information on the enemy and protect the force. During Operation IRAQI FREEDOM, technical intelligence, surveillance, and reconnaissance assets were unable to meet the 3d Infantry Division's information needs in the fluid combat environment.

Modular corps will face similar difficulties in shaping the battlefield for its subordinate units. Without a dedicated reconnaissance and security organization at the corps-level, Army formations will require divisions and brigade combat teams to conduct the five-step attack sequence with limited means to gain and maintain contact. This means divisions or brigade combat teams will have to gain and maintain contact using the same forces that disrupt, fix, maneuver, and follow through. Therefore, a dedicated reconnaissance and security force is vital for corps operations.

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Introduction

The United States Army's transformation from the Army of Excellence design to the Modular design had profound changes for the corps organization.[1] Under the Army of Excellence structure, the Army designed corps to serve as focal points for the execution of the AirLand Battle operational concept.[2] To successfully execute AirLand Battle, corps required a self-contained force capable of providing reconnaissance and security in offensive and defensive operations.[3] After conducting extensive studies, the Army assigned each corps an armored cavalry regiment. However, the Army's transformation to brigade-based modularity eliminated armored cavalry regiments from the force structure and fundamentally changed the way corps conduct reconnaissance and security.

In the Army of Excellence design, corps possessed organic capabilities for reconnaissance and security, but those organic capabilities no longer exist. John J. Grath observed that the Army's modular doctrine and organizational structures changed the way the Army conducted reconnaissance at the operational level. Instead of dedicated ground reconnaissance units, organizations above the brigade combat team level had to rely on technical surveillance activities. Furthermore, he claimed the modular concept required general purpose forces to conduct traditional cavalry missions.[4] This observation prompted an important question: do

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[1] The Army of Excellence was the termed used by the U.S. Army to describe the modernization and redesign of the Army's force structure in the 1980s. The modernization and redesign efforts applied to corps, division, and brigades. John L. Romjue, *The Army of Excellence: The Development of the 1980s Army* (Washington, DC: Center of Military History, 2004), 2-3.

[2] James A. Marks, "Just Do It: Close the Collection Gap," School of Advanced Military Studies Monographs (Fort Leavenworth, KS: Command and General Staff College, 1990), 13-14.

[3] John Romjue served as Chief, Historical Studies and Publication, Military History Office, U.S. Army Training and Doctrine Command. He authored several books about the development of military doctrine and tactical forces in the American Army of the 1970s-1990s. John L. Romjue, *A History of Army 86, Volume II: The Development of the Light Division, the Corps, and Echelons Above Corps, November 1979-December 1980* (Fort Monroe, VA: Historical Office, June 1982), 178.

[4] John McGrath is a retired U.S. Army officer and military historian for the Army's Combat Studies Institute. He has written several studies on the organization and employment of Army forces. John

corps-sized formations need a dedicated land-based organization optimized for reconnaissance and security in major combat operations?

Proponents for transformation argued two primary points. First, technology improvements offset the requirements for a ground force specially organized and equipped for reconnaissance and security. Second, corps will receive forces capable of meeting their reconnaissance and security needs. These forces include Stryker brigade combat teams, heavy brigade combat teams, or battlefield surveillance brigades that are all augmented with additional maneuver, artillery, engineer, and aviation support. Further supporting the proponents ideas are the parity in technology and mobility.

In the past, cavalry regiments had several reconnaissance and security capability advantages over other types of units within the Army's force structure. The capabilities were mobility, protection, firepower, and air-ground integration, which facilitated gathering intelligence on the enemy through surveillance or aggressive reconnaissance. In addition, the advantages also allowed the regiments to protect a corps main body from enemy observation and direct fire in offensive or defensive operations. Over time, technological improvements allowed for the Army to improve the mobility and intelligence, surveillance, and reconnaissance capability in all units.[5] To determine potential solutions for reconnaissance and security at the corps level requires an analysis of corps in major combat operations using the criteria of doctrine, capability, and organization.

Doctrine, capability, and organization were critical to the development of reconnaissance and security organizations following World War II. Historically, corps that engaged in major

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J. McGrath, *Scouts Out! The Development of Reconnaissance Units in Modern Armies* (Fort Leavenworth, KS: Combat Studies Institute Press, 2008), 202.

[5] Louis B. Rago, "Cavalry Transformation: Are We Shooting the Horse Too Soon?," School of Advanced Military Studies Monographs (Fort Leavenworth, KS: Command and General Staff College, 2002), 3.

combat operations possessed a formation organized and equipped to conduct reconnaissance on the enemy and terrain within an area of operation. The same formation also had the capability to conduct security operations in order to protect a corps' main body. In offensive operations, the corps required information about an enemy's location and disposition in order to mass overwhelming combat power at the decisive point of attack.[6] An excellent example of an armored cavalry regiment meeting a corps requirement in an offensive operation was 2d Armored Cavalry Regiment in support of VII Corps during Operation DESERT STORM. The armored cavalry regiment's operation emphasized the utility of keeping a force specially organized and equipped to perform reconnaissance and security. The cavalry regiments that fought in Kuwait in 1991 were prime examples of the Army's reconnaissance and security force design successes. Without an armored cavalry regiment for reconnaissance and security, corps have alternatives available but not with the overall capability found in a cavalry regiment.

A modern corps has a number of alternatives for reconnaissance and security: employ a heavily augmented brigade combat team, whether it is a Stryker brigade combat team or a heavy brigade combat team; employ a heavily augmented battlefield surveillance brigade; or employ a division headquarters with a brigade combat team or a battlefield surveillance brigade. Regardless of the alternative, none of these formations are organized or habitually associated with corps to perform reconnaissance and security for corps-level operations. Furthermore, brigade combat teams and battlefield surveillance brigades do not have the organic aviation capability found in armored cavalry regiments. A lack of air-ground integration for modular units is a small problem compared to the survivability issues of modular reconnaissance organizations. Wheeled-based reconnaissance organizations possess limited protection against weapon systems mounted on heavier armored vehicles.

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[6] Department of the Army, *Field Manual 100-15 Corps Operations* (Washington, DC: Government Printing Office, 1996), 5-1.

Potential adversaries such as North Korea, Russia, and China have sufficient armored forces and doctrine to conduct effective reconnaissance or counter-reconnaissance in high intensity combat operations.[7] A U.S. corps in major combat operations must contend with an enemy's armored advance guard or security zone force. Without a specially organized and equipped reconnaissance and security force, the Army is unprepared for major combat operations. To prepare the Army for major combat operations, a closer look at a corps requirement is necessary.

This study addresses a corps requirement for reconnaissance and security through the lenses of doctrine, capability and organization. The structure of the argument begins with an analysis of literature on reconnaissance and security as it relates to corps. Next, the study presents the methodology which identifies and describes the criteria for measurement. The study uses the criteria to describe how Army doctrine shapes a corps requirement for a reconnaissance and security organization, the capabilities such an organization requires, and the actual organizational structure of the reconnaissance and security force the Army designed. Finally, the study will determine whether or not a corps requires a dedicated land-based reconnaissance and security organization.

Literature Review

Reconnaissance and security remain a topic of discussion in the Armor community and the Army at large after modular transformation. Many authors have written about the capabilities required for reconnaissance and security as well as the need for each echelon of command to have a dedicated reconnaissance and security force. Understanding these points of view requires an analysis of the available literature on the subject of cavalry and Army transformation.

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[7] Keith Walters, "Who Will Fulfill the Cavalry's Functions? The Neglect of Reconnaissance and Security in U.S. Army Force Structure and Doctrine," *Military Review* (January-February 2011): 83-84.

The literature review details the issues surrounding a corps requirement for reconnaissance and security from multiple points of view. The selected books, monographs, and articles for this study point to a number of solutions for reconnaissance and security at every echelon of command. These solutions range from technology, expanding the mission set for general purpose forces to include reconnaissance and security, and finally to the traditional specially organized, trained, and equipped reconnaissance and security force. To frame the literature review, the study begins with those authors supporting the Army's approach to reconnaissance and security in the modular force.

John J. McGrath conducted an extensive study on the history of reconnaissance units in modern armies from the World War I period through Operation IRAQI FREEDOM. He concluded the reconnaissance paradigm changed after World War II from specialized units performing reconnaissance and security to general purpose organizations performing a wide range of combat tasks.[8] The wide-range of tasks included reconnaissance and security. Therefore, he declared the Army should take an additional step in its modularity concept and eliminate all combat reconnaissance units in the force. The personnel savings from the change would allow the Army to create more general purpose forces capable of conducting technical reconnaissance, surveillance, and combat operations.[9] McGrath's recommendation represented one view opposing specialized reconnaissance and security organizations.

The opposing views for specialized reconnaissance and security organizations revolved around two central arguments. The first was that general purpose forces had the ability to assume the reconnaissance and security mission. The second was that technological improvements

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[8] The study had two research questions: whether the modern US Army needed light or heavy reconnaissance forces? and what organizational level should the Army dedicate reconnaissance forces to? John J. McGrath, *Scouts Out! The Development of Reconnaissance Units in Modern Armies* (Fort Leavenworth, KS: Combat Studies Institute Press, 2008), 1.

[9] McGrath, *Scouts Out!*, 205.

increased situational awareness and reduced the need for a reconnaissance and security force. The supporters for traditional reconnaissance and security capabilities confront the issue from multiple points. The most noteworthy is the work challenging the Army's assumption of information dominance in future conflicts.

Herbert R. McMaster examined the assumption that dominant knowledge will permit U.S. forces "to achieve a high degree of certainty in future operations."[10] He argued the dominant knowledge assumption created vulnerabilities in the future force because of the faith placed on emerging technology not yet realized.[11] These vulnerabilities were the result of the Army trading combat power, deployability, and sustainability for information capabilities.[12] McMaster broadly tackled the issue of the Army's overreliance on technology to gain information and reduce uncertainty. Regardless of the U.S. Army efforts, adversaries would find ways to overcome the Army's technological superiority.

Thomas Cipolla examined the Maneuver Unit of Action's operational and organizational concept to determine if the Army required a "more robust reconnaissance and security force in the Future Force" than currently planned.[13] Although his work focused on the Unit of Action, known now as the brigade combat team, he provided another point of view about the danger of relying on technology. He claimed adversaries would find ways to overcome U.S. technological superiority.[14] Therefore, a Unit of Action needed an organization specially trained and equipped for reconnaissance and security against a range of adversaries from Soviet-modeled organizations

[10] Herbert R. McMaster, "Crack in the Foundation: Defense Transformation and the Underlying Assumption of Dominant Knowledge in Future War," Student Issue Paper (U.S. Army War College, Carlisle Barracks, PA: Center for Strategic Leadership, 2003), 1.

[11] McMaster, "Crack in the Foundation," 2.

[12] McMaster, "Crack in the Foundation," 97.

[13] Thomas Cipolla, "Cavalry in the Future Force: Is There Enough?," School of Advanced Military Studies Monographs (Fort Leavenworth, KS: Command and General Staff College, 2004), 3.

[14] These actions included shielding their operations from the US Army reconnaissance efforts, controlling the tempo of operations, and neutralizing technological overmatch. Cipolla, "Cavalry in the Future Force," 14.

to transnational threats. A reconnaissance and security force provided a Unit of Action with the capability to collection information without relying strictly on technical surveillance assets.

Louis Rago had a similar view of the Army's overreliance on technology in his analysis of cavalry and the *Objective Force Concept*.[15] Rago postulated the *Objective Force Concept* led the Army to assume it would have technology overmatch against adversaries in the future operating environment.[16] Rago claimed the assumption of technological overmatch drove the Army's decision to lightly arm interim cavalry squadrons, also known as Reconnaissance, Surveillance, and Target Acquisition Squadrons (RSTA), in the interim brigade combat team. He asserted RSTA squadrons were unprepared, in terms of firepower, protection and training, to fight for information or conduct security missions against an adequately trained and equipped enemy.[17] Rago's view highlighted the capabilities of firepower and protection which a reconnaissance and security force required.

Cipolla and Rago saw the need for future brigade-level units to have an organization capable of performing reconnaissance and security against a range of adversaries. Although the focus of Cipolla and Rago's studies was on the brigade combat team, their studies offered insights related to a corps requirement for a dedicated land-based reconnaissance and security organization. Given the enemy's inclination to overcome its technological inferiority, corps or any echelon must not rely solely on technology to find the enemy. Further expanding on the analysis conducted by Cipolla and Rago at the brigade-level, other research begins to connect the

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[15] The *Objective Force Concept*, also known as the quality of firsts, was the US Army's ability to see first, understand first, act first, and finish decisively. *United States Army White Paper: Concepts for the Objective Force* on the Official Homepage of the United States Army, http://www.army.mil/features/WhitePaper/default.htm (accessed on December 9, 2010).

[16] Other key assumptions were the future operational environment lacked a predictable, "templateable" enemy; the complex nature of places the enemy will choose to fight from; and the enemy will not have the ability to gain technological parity with U.S. forces. Rago, "Cavalry Transformation," 63.

[17] Rago, "Cavalry Transformation," 64.

brigade combat teams requirement for reconnaissance and security with a corps requirement for reconnaissance and security.

Matthew Green proposed a theory of operational reconnaissance developed from existing U.S. Army doctrine and German and Russian reconnaissance concepts from the interwar years. Two issues that Green identified had direct relevance to a corps requirement for a reconnaissance and security force. First, he stressed that the need to protect information was as important as the ability to gather information through multiple types of assets which he dubbed "reconnaissance superiority."[18] Second, he posited commanders at each echelon have different demands for information, reconnaissance, and security due to the nature and time horizons of their respective decisions. Therefore, every echelon of command needed direct control over multiple sources of information gathering assets and protection to attain reconnaissance superiority.[19]

Supporting Green's analysis regarding the need for every echelon of command to have a reconnaissance and security capability is John D. Rosenberger's research. Rosenberger made claims related to a corps' requirement for a land-based force optimized for reconnaissance and security. He claimed every echelon of command from company to corps required manned reconnaissance and surveillance capabilities and a specially trained force capable of conducting security operations. Manned reconnaissance provided information on the terrain and enemy in all weather conditions to a level of fidelity impossible for technical intelligence, surveillance, and reconnaissance assets.[20] While a security force preserved the striking power of the main body to

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[18] Green claimed it did not matter that a unit gained perfect situational awareness of an enemy, if the same unit did not prevent the enemy from achieving the same level of fidelity. Thus the ability to conduct security operations was necessary in order to protect information. Matthew K. Green, "Operational Reconnaissance: The Missing Link?," School of Advanced Military Studies Monographs, (Fort Leavenworth, KS: Command and General Staff College, 2003), 13.

[19] He argued assets such as unmanned aerial systems had the ability to support different levels of command, but the limited number of these assets precluded all commanders from being supported simultaneously. Green, "Operational Reconnaissance," 20, 32-33.

[20] John D. Rosenberger, "Breaking the Saber: The Subtle Demise of Cavalry in the Future Force," *Landpower Essay*, no. 04-1 (June 2004): 4, 5.

achieve the objective force's vision of gaining, retaining, and exploiting the operational and tactical initiative.

Although Rosenberger did not specifically address a corps-level organization, one can tie his assertion that every echelon of command required a reconnaissance and security force to a corps' requirement for a reconnaissance and security organization. Without a dedicated reconnaissance and security force, corps required brigade combat teams and reconnaissance squadrons to fill a gap in reconnaissance and security.

Andrew D. Goldin examined current formations designated as cavalry against the traditional cavalry missions. He determined that, although formations carry the cavalry name, these formations do not perform all of the typical cavalry roles. He articulated that prior to modularity the Army organized and trained specific formations to perform reconnaissance and security for each tactical echelon from corps to brigade.[21] However, the Army's modular force structure limited reconnaissance squadrons to reconnaissance and surveillance, not reconnaissance and security. He further pointed out reconnaissance squadrons had a limited role in security operations due to the lack of direct fire standoff, lethality, and survivability.[22] Therefore, reconnaissance squadrons were unable to perform missions such as a guard or a cover which left these missions as unmet requirements for the Army.[23]

An assessment of Goldin's analysis revealed that modular reconnaissance squadrons could not met the corps' requirement for reconnaissance and security. This capability gap opened other avenues for analysis in regard to how the Army expected to fill the reconnaissance and security requirements for corps. An excellent analysis of the armored cavalry regiment

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[21] The typical cavalry reconnaissance missions are zone, area, and route. The security missions are screen, guard, and cover. Andrew D. Goldin, "Ruminations on Modular Cavalry," *Armor Magazine*, (September-October 2006): 14.

[22] Goldin, "Ruminations on Modular Cavalry," 15.

[23] Goldin, "Ruminations on Modular Cavalry," 16.

capabilities compared to modular force brigade combat teams in support of a corps offensive operation follows in the next work.

In his monograph "The Last Cavalry Regiment: The Corps Commander's Requirement for the 3rd ACR," George A. Stewart III examined the relevance of the armored cavalry regiment, given the Army's desire for rapid dominance, by using an Iranian threat scenario.[24] Stewart used the scenario to analyze the reconnaissance and security requirements for a corps offensive operation. The Iranian adversary had a large, armored conventional force and a robust guerilla force which drove the requirement for firepower, protection, and mobility to enable a unit to conduct an offensive covering force mission or a rear area security mission.[25] He also claimed air-ground integration, robust reconnaissance and intelligence assets, and a robust logistical system increased the effectiveness of units performing a covering mission or a rear area security mission.[26] Stewart concluded the armored cavalry regiment remained the "most feasible, suitable, and acceptable unit for the offensive cover mission" due to its firepower, mobility, protection, air-ground integration, intelligence, surveillance, and reconnaissance capability, and its logistics structure.[27] In addition, the armored cavalry regiment's versatility enabled it to conduct rear area security as necessary.

Stewart focused on the capabilities resident in armored cavalry regiments which created versatility in the organization. His opinion that the armored cavalry regiment's versatility was as important for future conflicts as it was in the past complements Andrew Watson's research.

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[24] Rapid dominance is a theory that promised a swift and decisive victory over adversaries by using just the right amount of military resources. Harlan K. Ullman, James P. Wade, and L.A. Edney, *Shock and Awe: Achieving Rapid Dominance*, in National Defense University, Institute for National Strategic Studies, http://www.dodccrp.org/files/Ullman_Shock.pdf (accessed on February 27, 2011).

[25] George A. Stewart III, "The Last Cavalry Regiment: The Corps Commander's Requirement for the 3rd ACR," School of Advanced Military Studies Monographs (Fort Leavenworth, KS: Command and General Staff College, 2007), 7.

[26] Stewart, "The Last Cavalry Regiment," 37.

[27] Stewart, "The Last Cavalry Regiment," 49-51.

Watson argued the pending elimination of the armored cavalry regiment negatively impacted a higher echelon commander's options to conduct reconnaissance and security. He called attention to the armored cavalry regiment's versatility in performing a range of missions to include offensive, defensive, and stability operations. Although the armored cavalry regiment was built for reconnaissance and security, it had the ability to perform other missions. He claimed the Army needed the same type of versatility in the future. He concluded non-cavalry type organizations were not capable of performing a guard, cover, and screen mission so it was risky to assume otherwise.[28] Complementing Watson's view of versatility, the next work analyzed the problem through the lens of the Army's Capstone Concept.

Keith Walters' article claimed that "when the 3d Armored Cavalry Regiment converts to a Stryker Brigade Combat Team in 2011-2012, the Army will face the future without a full spectrum reconnaissance and security force."[29] Adversaries such as Russia, North Korea, or China possessed armor and mechanized forces capable of defeating reconnaissance and security forces found in U.S. brigade combat teams. He claimed the armored cavalry regiment was the most capable formation to meet the capstone concept requirement for action, initiative, and combined arms maneuver. He based his claim on the armored cavalry regiments firepower, mobility, survivability, and combined arms maneuver to fight and survive in rugged or urban terrain.[30] Walters made a valid argument regarding the ability of the future force to gather detailed information against an enemy equipped with armored vehicles. He is one of several advocates calling for the Army to retain specialized reconnaissance and security forces in the force structure.

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[28] Andrew J. Watson, "The U.S. Cavalry: Still Relevant in Full Spectrum Operations," School of Advanced Military Studies Monographs (Fort Leavenworth, KS: Command and General Staff College, 2010), 50-51.

[29] Keith Walters, "Who Will Fulfill the Cavalry's Functions? The Neglect of Reconnaissance and Security in U.S. Army Force Structure and Doctrine," *Military Review* (January-February 2011): 80.

[30] Walters, "Who Will Fulfill the Cavalry's Functions?," 83-84.

In summary, the analysis of the available literature provided several important points related to reconnaissance and security. First, the Army faced a broad range of threats in future conflicts from transnational threats to Soviet-modeled organizations like North Korea, China, and Iran. Second, every echelon of command required a dedicated reconnaissance organization to gather information on the enemy and terrain. Third, every echelon of command required a force capable of conducting security to protect a main body from enemy observation and direct fire. The fourth and final point, effective reconnaissance and security, required certain capabilities to fight for information and to protect a designated force. The capabilities most often listed were firepower, protection, and mobility. In addition, one author highlighted air-ground integration, logistics, and intelligence, surveillance and reconnaissance as necessary capabilities. These four points served as the basis for developing the evaluation criteria to answer the research question.

The selection of the evaluation criteria relate to the nature of the four points. The Army develops requirements and capabilities for reconnaissance and security organizations to meet certain situations. Therefore, it is important to place the four points into the appropriate context to properly analyze case studies which relate to a corps requirement for a reconnaissance and security force. For this study, the appropriate context is doctrine, capability, and organization. Doctrine describes the employment of the Army against an adversary in future conflicts, which in turn drives capability requirements. The capabilities are specific functions or equipment which a force needs to perform a mission. And finally, the Army embodies the required capabilities into an organization. A more detailed explanation of the criteria is in the following section.

Methodology

The issue with corps lacking a dedicated reconnaissance and security force requires an in-depth analysis of a corps' reconnaissance and security requirement during major combat operations. The case studies for analysis are the II Field Force, Vietnam and 11th Armored Cavalry Regiment in Operation TOAN THANG 43; VII Corps and 2d Armored Cavalry

Regiment in Operation DESERT STORM; and V Corps in Operation IRAQI FREEDOM.[31] The first two case studies represent different eras in the U.S. Army's history which saw corps-sized formations employ a dedicated reconnaissance and security organization. These case studies establish the Army's previous experience with armored cavalry regiments against different enemies and on different types of terrain. The last case study, Operation IRAQI FREEDOM, addresses a corps operating without a dedicated reconnaissance and security organization. The set of criteria to analyze the case studies are doctrine, capability, and organization.

Doctrine describes the operational concept of how the Army employs and fights its forces against a perceived adversary, on predicted terrain, and under certain conditions.[32] Doctrine is important to the conduct of this study since it provides information about the type of enemy and terrain corps and armored cavalry regiments would fight within an area of operation. Furthermore, it delineates the role of the armored cavalry regiment in meeting the reconnaissance and security requirements for a corps.

Doctrine serves as the base to determine how effective an armored cavalry regiment was in the performance of its missions against a new enemy and on terrain not previously analyzed. For instance, following World War II and until the collapse of the Soviet Union in the 1990s, the Army's operational concepts dealt with defeating the Soviet threat on a battlefield in central Europe. Yet, the Army never fought the Soviet Union; instead, the U.S. fought wars in Vietnam, Kuwait, and Iraq. This doctrine criterion will be measured by the focus doctrine places on the echelon of command, identification of a specific adversary, expected terrain for combat

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[31] II Field Force, Vietnam, was a corps-sized U.S. formation created by Military Assistance Command Vietnam to support the Army of the Republic of Vietnam's III Corps Tactical Zone. The field force had the ability to assume the role of a field army with one or more tactical corps. William C. Westmoreland, *A Soldier Reports* (New York, NY: Dell Publishing Company, 1976), 201-202.

[32] Robert A. Doughty, *The Evolution of US Army Tactical Doctrine, 1946-76* (Fort Leavenworth, KS: Combat Studies Institute, 1979), 1-2.

operations, and the presence of guidance for reconnaissance and security for a corps-sized formation.

Capability is the ability to achieve a desired effect under conditions through combinations of means and ways across the doctrine, organization, training, material, leadership and education, personnel, and facilities to perform a set of tasks to execute a specified course of action.[33] A corps reconnaissance and security organization requires certain capabilities to fight for information or to protect the force. This criterion will be measured by the presence of those capabilities: mobility, firepower, protection, air-ground integration, gap-crossing, and flexibility in operating for different echelons of command.[34] In order for the Army to meet the requirements of the operating environment, the Army must modify or create organizations with the necessary capabilities.

Organization refers to the functional structure of a unit developed by Army force designers in order to meet the capabilities required by doctrine. As Mary Jo Hatch describes, organizations arise from activities that individuals cannot perform by themselves or that cannot be performed as efficiently and effectively alone as they can be with the organized effort of a group.[35] The Army builds units to perform selected functions such armored cavalry regiments and reconnaissance and security. The organizational structure gives units synergy and versatility to perform its assigned mission. This criterion will be measured by the presence of changes or

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[33] Joint Chiefs of Staff, *Chairman of the Joint Chiefs of Staff Instruction 3170.01G Joint Capabilities Integration and Development System*, Chairman of the Joint Chiefs of Staff Directive Library http://www.dtic.mil/cjcs_directives/cjcs/instructions.htm (accessed on February 21, 2011).

[34] Mobility is the ability match or exceed the ground movement of the supported command . Firepower is the ability to integrate direct and indirect fire from the ground cavalry troops, air cavalry troops, and fires batteries. Protection deals with the survivability of the primary vehicle platform for the cavalry regiment's ground cavalry squadrons. Air-ground integration is the ability for ground and air cavalry troops to conduct reconnaissance and security as a single force. Gap-crossing is the ability to conduct river crossings with organic engineer assets. Flexibility is the ability to support different echelons of command without modifications to the regimental headquarters.

[35] Ann L. Cunliffe and Mary Jo Hatch, *Organization Theory: Modern, Symbolic, and Postmodern Perspectives* (New York, NY: Oxford University Press, 2006), 101.

modifications to an armored cavalry regiment's organization to meet a supported commander's reconnaissance and security requirement and by an identification of the rules of allocation for armored cavalry regiments to corps.[36]

The analysis of each study will follow a series of common and specific questions tied to the criteria described above. The three common questions are:

1) What was the Army's operational concept for the period? The operational concept, contained in doctrine, is the Army's strategy for the employment of forces against a specific enemy, on given terrain, and under certain battlefield conditions. It provides an understanding of the time, space, and distance factors associated with corps reconnaissance and security. The strategy also focuses on an echelon of command such as a field army, corps, or division. This question ensures there is a common starting point for each of the case studies.

2) What capabilities did the Army require for corps and armored cavalry regiments to conduct reconnaissance and security as outlined in doctrine? Capabilities refer to the function or characteristics corps and armored cavalry regiments require to conduct reconnaissance and security. The capabilities question facilitates the understanding of the time, space, distance, and mission requirements the Army placed on corps and armored cavalry regiments.

3) How did the Army organize, structure, and allocate units to fight and win in accordance with the operational concept? This is the final common frame of reference questions which assist in gaining an understanding of the functional structure of armored cavalry regiments. In addition, the question assists in the identification of the Army's organizational theme for a

[36] Allocation rules allow planners to determine the number of units by capability, mission, or doctrinal employment to meet an operational requirement. There are four types of rules of allocation: theater structure, existence, workload, and manual (direct input). For the purpose of this study, the theater structure is the primary rule of allocation discussed. The theater structure rule is the allocation of units as a function of the theater's physical and organizational structure, e.g. one medium helicopter aviation company per corps. Department of the Army, *Army Regulation 71-11: Force Development Total Army Analysis (TAA)* (Washington, DC: Government Printing Office, 1995), 7.

particular period, such as the Army of Excellence. Furthermore, this question assists to understand the rules of allocation for armored cavalry regiments in relation to corps.

For the 11th Armored Cavalry Regiment in Operation TOAN THANG 43, the case study highlights the Army's employment of an armored cavalry regiment on different terrain and against a different enemy than outlined in doctrine. Instead of fighting the Soviet Army in central Europe, the Army fought the Viet Cong and the North Vietnamese Army in South Vietnam and in Cambodia. The three specific questions which focus the analysis of this case study are:

1) How did the operation in Cambodia differ from the Army's operational concept during that period? The purpose of the question is to contrast the Army's operational concept which emphasized major combat operations with the operation into Cambodia. In addition, the analysis will yield the differences of the North Vietnamese Army and Viet Cong in South Vietnam to the Soviet Army in central Europe. Furthermore, the findings from the case should provide insights into how effective the armored cavalry regiment was in the performance of its assigned missions against an enemy and on terrain not previously predicted in Army doctrine.

2) What reconnaissance or security capability did II Field Force, Vietnam, require for Operation TOAN THANG 43? The purpose was to determine the capabilities II Field Force identified as requirements for the operation. The findings from the case should provide insights into any reconnaissance or security requirements for the operation. Another expected finding is to determine if II Field Force or the 1st Cavalry Division utilized the armored cavalry regiment as a reconnaissance and security force or as another combat maneuver element.

3) How did II Field Force, Vietnam, organize and allocate 11th Armored Cavalry Regiment for Operation TOAN THANG 43? The purpose of these related questions is to determine if the Army adhered to its rules of allocation for assignment of armored cavalry regiments to corps. In addition, the question assists in determining changes to the armored cavalry regiments structure or organization prior to the operation. The findings should provide the level of command 11th Armored Cavalry Regiment supported during the Cambodian incursion.

The case study on the 2d Armored Cavalry Regiment in Operation DESERT STORM emphasizes the doctrinal employment of an armored cavalry regiment in major combat operations in support of a corps. This case study serves as the model for a dedicated reconnaissance and security force executing its assigned mission against an enemy organized and equipped similar to the Soviet Army. The three specific questions for this case study are:

1) How did the VII Corps operation differ from the Army's operational concept? The purpose of this question is to contrast the Iraqi Army in Kuwait to the Soviet Army in central Europe. The findings from the case study should provide insights into the differences between the enemy and terrain.

2) What reconnaissance and security capabilities did VII Corps require for the invasion of Kuwait? The purpose is to determine the reconnaissance and security capability for VII Corps. The findings from the case study should provide VII Corps and 2d Armored Cavalry Regiment mission statements. Moreover, the case study should provide VII Corps requirement for an offensive covering force. Finally, the findings should highlight the armored cavalry regiments capability in performing an offensive covering force.

3) How did VII Corps organize and allocate 2d Armored Cavalry Regiment for the offensive? The purpose of this question is to determine the deficiencies the Army identified in 2d Armored Cavalry Regiment and how the Army modified the organization to overcome the shortfall. The findings expected from the case study should provide modifications to the regiment's equipment to improve its reconnaissance and security capability.

The case study on U.S. V Corps invasion of Iraq during Operation IRAQI FREEDOM highlights a corps operating without an armored cavalry regiment in major combat operations. The case study will provide insight on challenges the corps had without a dedicated reconnaissance and security force. The study will also address the solutions V Corps used to get provide reconnaissance and security during the invasion. In addition, the study will emphasize the potential issues future corps commanders will face when conducting major combat operations

without a dedicated reconnaissance and security force. Guiding the case study are three specific questions:

1) How did V Corps operation during the invasion of Iraq differ from the Army's operational concept during that period? The purpose is to contrast the Army's operational concept with the enemy and terrain in Iraq. The expected findings from the case study include the doctrinal employment of the armored cavalry regiment in terms of time, space, and distance away from the main body. This is important to determine how the corps filled the void created by operating without an armored cavalry regiment. Furthermore, another expected finding is the identification of doctrinal changes to corps and armored cavalry regiment roles and mission since Operation DESERT STORM.

2) What reconnaissance and security capability did V Corps require for the invasion of Iraq? The purpose is to identify the V Corps reconnaissance and security requirements for the operation. The expected findings include the corps requirement to provide security for the main body of the invasion force. Other expected findings include the requirement to penetrate the enemy's security zone forces and to identify the Iraqi main lines of defense.

3) How did V Corps organize and allocate its forces for reconnaissance and security support? The purpose is to identify organizational solutions V Corps implemented to conduct reconnaissance and security. The expected findings include the rules of allocation for armored cavalry regiments during the time period. Another expected finding is how the corps filled the void created by operating without a dedicated land-based reconnaissance and security force.

The methodology provides the framework for analyzing the selected case studies. It defines the doctrine, capability, and organization criteria to focus the collection of data. The set of questions serve as the focal points for analyzing and measuring the categories of the data collected in the case studies to determine if a corps requires a dedicated land-based reconnaissance and security organization.

Cavalry in Vietnam 1970

Operation TOAN THANG 43 in Cambodia during May 1970 was a large scale offensive operation which demonstrated the employment of a division-sized element with an armored cavalry regiment in support. The operation unfolded in the jungles and rubber plantations along the Cambodian border area which was much different from the battlefield conditions of central Europe. The enemy opposing the U.S. Army and Army of the Republic of Vietnam task force was the North Vietnamese Army and the Viet Cong. The events prior to the Vietnam War and during Operation TOAN THANG 43 provide an opportunity to analyze the use of a reconnaissance and security force using the selected criteria of doctrine, capability, and organization.

Doctrine

The 1962 version of *Field Manual (FM) 100-5 Operations* contained broad guidance to prepare the Army for future operations. The manual prepared the Army to execute a broad range of missions against a wide range of opposing forces in any area of the world in conflicts across the spectrum of war.[37] The broad nature of the manual had an impact on the focus placed on the echelon of command, the identification of an adversary and the type of terrain the Army expected to fight on, and offered limited guidance on the echeloning of forces in offensive operations. For the level of command focus, the manual did not explicitly direct the guidance for the employment of forces toward a single echelon such as the army group, field army, or corps. The guidance

[37] The spectrum of war included cold war, limited war, and general war. "Cold war includes the complete scope of actions, other than limited or general war, which can be used in a power struggle between contending nations or coalitions." "Limited War is characterized by conscious restraint on the part of the belligerents with regard to one or more of its aspects; e.g., objectives, weapons, locale, or participants. "General War is an armed conflict in which opposing nuclear powers or coalitions employ all the means available to them." Department of the Army, *Field Manual 100-5: Field Service Regulations Operations* (Washington, DC: Government Printing Office, 1962), 4-6.

applied to all echelons of command from the army group level to the division level. The manual's broad nature had impacts in other areas as well.

In keeping with the broad range of conflicts, the U.S. Army expected to face a broad range of opposing forces. The opposing forces ranged from loosely organized bands of irregular forces to a highly trained force equipped with the most modern equipment. Although the manual highlighted any type of conflict at any location, the manual stressed the need to prepare to "fight a general war to a successful conclusion" on a nuclear or non-nuclear battlefield.[38] This led the Army to prepare to fight a modernized and highly trained adversary.

FM 100-5 (1962) did not specifically identify an adversary the U.S. Army would face in a general war. However, in February 1965, U.S. Army Europe faced a large modern Soviet Army with an estimated twenty divisions in East Germany with an additional thirty-three divisions available for reinforcement from within the Russian border.[39] To meet this adversary, corps required a reconnaissance and security force to provide early warning and to protect a corps' main body. In addition, corps had the ability to augment subordinates with reconnaissance and security as necessary. The reconnaissance and security organization supported the Army's approach to echeloning defensive operations as contained in doctrine.[40] While defensive echeloning of forces was explicit in doctrine, the echeloning of forces in offensive operations was not.

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[38] Department of the Army, *Field Manual 100-5 Field Service Regulations* (Washington, DC: Government Printing Office, 1962), 13.

[39] The twenty divisions included ten tank divisions and ten motorized rifle divisions from the Group of Soviet Forces, Germany. Headquarters, United States Army Europe, "USAREUR Intelligence Estimate-1965", in the Parallel History Project on Cooperative Security NATO Military Planning Collections, http://www.php.isn.ethz.ch/collections/colltopic.cfm?lng=en&id=18593&navinfo=14968 (accessed on March 14, 2011), 22, 10-2. Ingo Trauschweizer, *The Cold War U.S. Army: Building Deterrence for Limited War* (Lawrence, KS: University Press of Kansas, 2008), 62.

[40] The echelons for defensive operations were the security echelon, forward defense echelon, and the reserve echelon. Department of the Army, *Field Manual 100-5 (1962)*, 77-78.

The Army did not clearly articulate the echeloned approach for offensive operations in doctrine contained in *FM 100-5 (1962)* and the 1963 version of *Field Manual 100-15 Field Service Regulations Larger Units. FM 100-5 (1962)* described attacking in multiple columns in the advance to contact section. In the execution of an advance to contact, a commander needed a covering force, a main body, and security forces. The covering force developed the enemy situation and prevented the unnecessary delay of main body forces, the main body conducted the attack, and security forces protected the main body's flanks and rear area. A review of *FM 100-15 (1963)* revealed the manual did not include an explicit discussion of an echeloned approach for offensive operations either.

Doctrine entering the Vietnam War applied broadly across the spectrum of war and levels of command. Although the doctrine manuals of the pre-Vietnam era had a broad range of adversaries, the Army prepared to fight the Soviet threat which was a different threat the Army faced in Cambodia in 1970 during the Vietnam War.

By 1970, the North Vietnamese Army had long since established sanctuaries for its forces and logistics support in Cambodia. In the area of Operation TOAN THANG 43, the North Vietnamese Army and Viet Cong's B-2 Front straddled the Cambodian-South Vietnam border.[41] The front totaled nine infantry regiments, three sapper companies, two infantry battalions in the 66th Base Section, two rocket regiments, and one air defense battery. Although a formidable force on paper, the B-2 Front operated at less than fifty percent combat strength. Despite its strength, the North Vietnamese Army and Viet Cong continued to employ squad-sized attacks and battalion-sized attacks when the front could mass its forces. To overcome this enemy and destroy the Cambodian sanctuaries, U.S. forces required a plan that relied on surprise, initiative, mobility, and firepower.

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[41] John M. Shaw, *The Cambodian Campaign: The 1970 Offensive and America's Vietnam War* (Lawrence, KS: University of Kansas, 2005), 46.

The plan for Operation TOAN THANG 43 was a basic "hammer and anvil" operation which used the major elements of offensive maneuver outlined in *FM 100-5 (1962)*: envelopment, penetration, and exploitation.[42] The concept of the operation was a combination of air mobile infantry, armor, and mechanized assaults into Cambodia. First, the Third Airborne Brigade from the Army of the Republic of Vietnam would conduct an air assault to seize key intersections in between Fishhook and Highway 7 to block enemy escape routes. Second, the 11th Armored Cavalry Regiment and Third Brigade, 1st Cavalry Division were to penetrate enemy defenses on two axis of advance to destroy enemy forces, link-up with the Third Airborne Brigade, and secure a designated area near Fishhook. Third, the 2d Battalion, 47th Infantry (Mechanized) (2-47 Infantry) and 2d Battalion, 34th Armor (2-34 Armor) were to attack to seize Highway 7 and deny the North Vietnamese Army freedom of movement. Fourth, the 11th Armored Cavalry Regiment was to attack along Highway 7 exploit initial successes and to deny the enemy information about the location and direction of the task force's attack. The fifth and final action, all units were to locate and destroy enemy supply caches and base areas. [43]

Doctrine was very broad prior to the Vietnam War, but the Army prepared to fight and win a general war against the Soviet Army. To defeat this adversary, doctrine provided guidance on the employment of forces which was necessary for the development of Army capabilities in units such as corps and armored cavalry regiments.

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[42] The "hammer and anvil" operation required one unit to occupy a blocking position, while another unit attacked in the direction of the blocking position to defeat or destroy enemy forces. Robert A. Doughty, *Evolution of US Army Tactical Doctrine, 1946-76* (Fort Leavenworth, KS: Combat Studies Institute Press, 2001), 31.

[43] Shaw, *The Cambodian Campaign*, 69. Donn A. Starry, *Armored Combat in Vietnam* (New York: The Bobbs-Merrill Company, 1980), 171-176.

Capability

The Army required corps and armored cavalry regiments to have the capability to fight and win in a general war against an adversary highly trained and equipped with modern weapons and vehicles. To meet that requirement, the Army identified capabilities required at the corps-level which were infantry divisions, armor divisions, armored cavalry regiments, fires, and combat support elements. Each organization provided corps with a distinct capability whether it was a close combat, indirect fire, or a logistics capability. For the armored cavalry regiment, it provided corps with the capability to perform reconnaissance and security over large areas.[44]

Given the nature of the Soviet threat, the Army required armored cavalry regiments to have its own set of capabilities which were to "operate as a light armored task force in security and light combat missions, without reinforcement; operate as a highly mobile task force when suitably reinforced; execute screening and counter-reconnaissance missions; and reconnoiter for higher echelons, normally by independent action without reinforcement."[45] In addition, the armored cavalry regiment needed the capability to conduct rear area security as well as operate under the control of different echelons of command from the field army level to the division level.[46] The capabilities corps and armored cavalry regiments required to fight the Soviet Army were the same capabilities II (U.S.) Field Force Vietnam identified as necessary for the offensive operation into Cambodia. The proximity of the 11th Armored Cavalry Regiment to the Cambodian border facilitated II Field Force's, Vietnam, decision to use the unit in Operation TOAN THANG 43. With limited planning time and a sketchy intelligence assessment, the regiment demonstrated the value of its capabilities to a supported commander.

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[44] Department of the Army, *Field Manual 100-15 Field Service Regulations Larger Units* (Washington, DC: Government Printing Office, 1963), 42-45.

[45] Bruce C. Clarke, "Armored Cavalry Regiments Along the Iron Curtain" *Armor* LXVII, no. 3 (May-June 1958): 22-23.

[46] Department of the Army, *Field Manual 100-15(1963)*, 42.

General Robert Shoemaker, Assistant Division Commander for the 1st (U.S.) Cavalry Division and leader of Task Force Shoemaker, suffered from a lack of intelligence about Cambodia and a lack of planning time. The 1st Cavalry Division did not have intelligence on the terrain or enemy situation in Cambodia since the country was off-limits to conventional operations because of political restraints.[47] Due to operational security constraints, and with only four days to plan and execute the operation, General Shoemaker "expected to find the enemy by simply bumping into him."[48] To overcome the lack of intelligence, the task force commander required protection and firepower for the task force to overcome initial enemy contact, gain the initiative, and destroy any enemy resistance encountered. The task force commander required other capabilities to deal with the terrain in Cambodia.

The restricted terrain presented mobility challenges for the task force and provided excellent cover and concealment for the enemy which generated additional capability requirements. Task Force Shoemaker had limited road networks available for use in Cambodia. Plus, the existing roads were in poor condition so ground units had to traverse through terrain covered by jungle and rubber plantations. These facts drove the requirement for cross-country mobility in restricted terrain. In addition to the mobility challenges, the jungle and rubber plantations provided excellent cover and concealment for the enemy to establish ambushes along the task force's avenues of approach. The task force needed protection for its ground forces to survive enemy ambushes. The lack of roads and likelihood of North Vietnamese Army and Viet Cong ambushes generated requirements for the mobility and protection offered by mechanized forces from the 11th Armored Cavalry Regiment and 25th (U.S.) Infantry Division.

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[47] Cambodia declared itself a neutral country so Presidents Lyndon Johnson and Richard Nixon did not authorize the use of conventional forces inside Cambodia. Shaw, *The Cambodian Campaign*, 30.

[48] Shaw, *The Cambodian Campaign*, 63, 67.

The Task Force Shoemaker commander knew the plan for the invasion was simple and would require adjustments to minimize threats and maximize opportunities; therefore, General Shoemaker did not have much of a choice in the selection of units. He used units that had firepower, mobility, and protection. In addition to the capabilities already identified, the use of 11th Armored Cavalry Regiment provided the task force with a combined arms organization which would later demonstrate the versatility of the regiment.

Organization

The Vietnam-era Army organized armored cavalry regiments as combined arms units to support the reconnaissance and security requirements of a field army or a corps-level formation. Although the rule of allocation at the time was one armored cavalry regiment per corps, the armored cavalry regiment had the ability to support a field army, a corps, or a division.[49]

The typical armored cavalry regiment had a headquarters and headquarters troop, three armored cavalry squadrons, and one air cavalry troop. In each armored cavalry squadron, there were three armored cavalry troops equipped with M48 series tanks and M114 reconnaissance vehicles, a tank company equipped with M48 series tanks, and a field artillery battery equipped with M109 self-propelled howitzers.[50] Prior to the regiment's deployment to Vietnam, the Army replaced the M48 tanks and M114s in the cavalry platoons with M113 armored personnel carriers.[51] The regiment's organization prepared the unit to fight the Soviet Army in a general war, but, more importantly, these capabilities proved equally valuable during the Cambodian offensive.

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[49] Robert S. Cameron, *To Fight or Not to Fight? Organizational and Doctrinal Trends in Mounted Maneuver Reconnaissance From the Interwar Years to Operation IRAQI FREEDOM* (Fort Leavenworth, KS: Combat Studies Institute Press, 2010), 100.

[50] Starry, *Armored Combat in Vietnam*, 52.

[51] John M. Shaw, *The Cambodian Campaign*, 43. Starry, *Armored Combat in Vietnam*, 51-52, 72-73.

In April 1970, Military Assistance Command Vietnam issued guidance to II Field Force, Vietnam, to achieve tactical surprise for the operation into Cambodia. In accordance with the guidance, General Michael Davison, II Field Force commander, used units already operating near the border which were the 1st Cavalry Division, 11th Armored Cavalry Regiment which was under the operational control of 1st Cavalry Division, and elements from the 25th Infantry Division. General Davison tasked 1st Cavalry Division to plan and execute the mission. In response to the order, the 1st Cavalry Division commander task organized his Third Brigade, the 11th Armored Cavalry Regiment, Third Airborne Brigade (Army of the Republic of Vietnam), and 2-34 Armor (-) and 2-47 Infantry (Mechanized) from the 25th (U.S.) Infantry Division under Task Force Shoemaker.[52] The individual units retained their respective task organizations for simplicity and to prevent any last minute link-up and movement of units which indicated a pending operation.

For the 11th Armored Cavalry Regiment, this meant II Field Force, Vietnam, allocated the regiment to Task Force Shoemaker; a division-level organization. Furthermore, the task organization also meant the 11th Armored Cavalry Regiment would fight as regiment, not with individual squadrons or troops allocated to support other units. Although the regiment did not support a corps-sized formation, its presence allowed II Field Force, Vietnam, to augment Task Force Shoemaker with a reconnaissance and security capability for the duration of the operation. The Task Force was set and ready to begin the operation.

Operation TOAN THANG 43

The Cambodian invasion started at approximately 0730 hours on 1 May 1970 with U.S. and Army of the Republic of Vietnam forces crossing the border. The first unit across was 1st Squadron, 9th Cavalry (1-9 Cavalry), 1st Cavalry Division, with its air cavalry troops. Following

[52] Davison, "Senior Officer Debriefing Report," 6-7. Shaw, *The Cambodian Campaign,* 65-66.

1-9 Cavalry was the first air assault lift of the Third Airborne Brigade, Army of the Republic of Vietnam. During this time, the mechanized and armor forces from the 1st Cavalry Division, 11th Armored Cavalry Regiment, and 25th Infantry Division moved to the border and crossed.[53] The 11th Armored Cavalry Regiment's participation began shortly after 0945 hours with its direction of attack toward the region known as Fishhook.

The combined arms organization of the 11th Armored Cavalry Regiment paid dividends for the regiment and Task Force Shoemaker. The regiment's air cavalry troop led 2d and 3d Squadrons into Cambodia. On several occasions the air cavalry scouts provided early warning of enemy concentrations to the ground cavalry squadrons. One such incident was on the first day of the invasion. An aerial scout located a battalion-sized enemy force entrenched along 2d Squadron's axis of advance. The air cavalry scout's warning came just as the enemy ambushed the ground cavalry squadron. The squadron immediately counter-attacked while the 3d Squadron attacked the enemy's flank and the air cavalry troop attacked the enemy's withdrawal routes. The engagement resulted in fifty-two enemy killed in action and two U.S. soldiers killed in action.[54] The combined arms formation allowed the regiment to overcome an enemy in prepared positions by attacking it from multiple directions with direct and indirect fires. In addition, the protection afforded the armored vehicles allowed the soldiers to survive the initial contact.

The tactical surprise achieved by II Field Force Vietnam during the initial invasion led to early opportunities and the need for 11th Armored Cavalry Regiment's mobility and firepower. On 3 May, General Davison assessed the enemy was withdrawing so he ordered the regiment to attack to seize Snuol, which was forty kilometers north of Fishhook.[55] Snuol served as a distribution point for the North Vietnamese Army in between the Ho Chi Minh Trail and the

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[53] Shaw, *The Cambodian Campaign*, 69.

[54] Starry, *Armored Combat in Vietnam*, 171-172.

[55] Starry, *Armored Combat in Vietnam*, 172. Shaw, *The Cambodian Campaign*, 76.

Sihanoukville Trail. In order for the regiment to reach Snuol, the unit advanced through the jungle and rubber plantations until reaching Highway 7 which was a gravel road providing north and south access along the Cambodian border.

The regiment's mobility paid huge dividends for Task Force Shoemaker during the attack to Snuol. The regiment received its attack order late on the afternoon of 3 May and by mid-day on 4 May the regiment had blazed a trail through the restricted terrain to reach Highway 7. Once on the highway, the regiment's ground squadrons advanced at speeds as high as sixty-five kilometers an hour until stopped by a series of river obstacles.[56] Crossing the rivers required both the internal gap crossing capability of the regiment in addition to bridging assets provided by the 1st Cavalry Division.

By mid-day on 5 May, the 2d and 3d Squadron's were across the last of the rivers and moving toward Snuol.[57] On entering Snuol, the aerial scouts made contact with the North Vietnamese Army on the lone airfield in the city. The regiment surrounded the airfield and city with 2d and 3d squadrons while bringing forward its artillery battery to support the attack.

The squadrons quickly overran the North Vietnamese Army positions and seized the city after short intense engagements. The regiment used its well practiced tactic of attacking from multiple directions throughout the depth of the defense. The 3d Squadron attacked the front of the North Vietnamese Army defense, while the 2d Squadron attacked the left flank and a combination of air and ground cavalry sections attacked the right flank. To disrupt the enemy withdrawal, the regiment's artillery battery fired on the likely egress routes. The initial invasion and seizure of Snoul put the 11th Armored Cavalry Regiment approximately thirty-five

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[56] Starry, *Armored Combat in Vietnam,* 172-173.

[57] Along the route to Snuol, the regiment had to conduct three separate river crossings. Each of the rivers had destroyed bridges which required the regiment to use its vehicle launched bridges as well as heavy bridging assets. The regiment crossed the first river on 4 May and the two remaining rivers on 5 May. Starry, *Armored Combat in Vietnam,* 172-173.

kilometers into Cambodia.[58] With the initial task force objectives secured, units started the search for caches; a task that highlighted a limitation of the armored cavalry regiment.

The North Vietnamese Army practiced excellent field discipline to hide supplies within the terrain which required the use of dismounted troops, a capability the armored cavalry regiment did not have.[59] Finding the caches proved a difficult challenge for the task force due to the North Vietnamese Army's field craft and the lack of access to the area by intelligence assets prior to the offensive. Units had to find caches the hard way; by conducting time consuming searches by dismounted infantry.[60] The armored cavalry regiment had a limited dismounted capability to perform these searches, so the regiment transitioned to other missions such as convoy security, route security, and area security. These missions, unlike the hunt for caches, made practical use of the armored cavalry regiment's capabilities until the end of the campaign.[61]

By 30 June 1970, when the last U.S. unit left Cambodia, the combined operation by U.S. and Army of the Republic of Vietnam forces had cost the North Vietnamese Army and Viet Cong approximately 3,100 soldiers killed in action, 5,000 weapons, 316 short tons of ammunition, and 2,700 short tons of rice.[62] More important than the loss of personnel, weapons, and supplies, the operation destroyed the enemy's logistics system in southern Cambodia and disrupted the North Vietnamese Army's Plan "X" Campaign.[63]

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[58] Starry, *Armored Combat in Vietnam*, 173-174. Shaw, *The Cambodian Campaign*, 76.

[59] Michael S. Davison, "Senior Officer Debriefing Report: LTG Michael S. Davison, CG, II Field Force Vietnam and Third Regional Assistance Command, Period 15 April 70 thru 26 May 71 (U)," in Defense Technical Information Center, http://handle.dtic.mil/100.2/AD516373, (accessed on March 11, 2011), 6.

[60] Davison, "Senior Officer Debriefing Report," 8.

[61] Shaw, *The Cambodian Campaign*, 78.

[62] Shaw, *The Cambodian Campaign*, 158.

[63] The NVA/VC Plan "X" Campaign was a series of artillery and sapper attacks scheduled to occur throughout the III Corps Tactical Zone in July 1970. 14th Military History Detachment, "1st Cavalry Division (Airmobile) Operational Report- Lessons Learned 1 May – 31 July 1970," in the Vietnam Center and Archive at Texas Tech University,

Assessment of Cavalry in Vietnam 1970

Doctrine contained in *FM 100-5 (1962)* focused the Army on fighting a general war against a highly trained adversary outfitted with modern equipment. The anticipated adversary was the Soviet Army in central Europe, which drove the requirement for U.S. Army corps to have a reconnaissance and security force for early warning and to protect a corps main body. This requirement was valuable during the Cambodian offensive against enemies trained and equipped to different degrees of modernization and proficiency.

Another aspect outlined in doctrine was the ability for a higher headquarters to augment subordinates with additional capabilities based on mission requirements. II Field Force, Vietnam, a corps-sized U.S. organization, employed the 11th Armored Cavalry Regiment in support of Task Force Shoemaker in Operation TOAN THANG 43. Although a corps asset, the regiment augmented a division-sized organization with additional capabilities needed for the operation.

Designed to conduct operations on the rolling hills of central Europe, 11th Armored Cavalry Regiment's inherent capabilities were vital to Task Force Shoemaker in Operation TOAN THANG 43. The regiment's mechanized mobility gave it the ability to utilize Cambodia's poor road networks or blaze new trails through the jungle and rubber plantations. In addition, the protection offered by the armored vehicles enable the regiment to survive enemy ambushes. The regiment's air-ground integration capability was also a necessary requirement for the operation. The air cavalry troop screened forward of the ground squadrons advances providing early warning and close air attacks. The firepower capability allowed the regiment to mass indirect fire from its organic artillery with the direct fires from its ground squadrons and air cavalry troop to destroy North Vietnamese Army and Viet Cong forces.

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http://www.virtualarchive.vietnam.ttu.edu/starweb/virtual/virtual/servlet.starweb?path=virtual/virtual/materials%5Fnew.web&search1=ONUMN%3D3040102004 (accessed on March 4, 2011), 3.

Finally, the regiment's organization was critical to Task Force Shoemaker's employment of forces in the Cambodian campaign. The Army organized the reconnaissance and security force with a combined arms structure enabling the armored cavalry regiment to operate as a self-contained unit operating away from a supported main body. During the Cambodian offensive, Task Force Shoemaker did not augment the armored cavalry regiment with engineers, artillery, or aviation assets. The regiment had these capabilities within its organization. This proved critical during regiment's attack to Snuol, forty kilometers from the task force's main body. The regiment operated out of the division's fire support range, so the unit relied on its internal fire support assets. In addition, the regiment had to utilize its organic engineer assets for river crossing operations. Overall the operation highlighted the soundness of the regiment's combined arms structure for reconnaissance and security. The regiment demonstrated the value of each of its capabilities such as mobility, firepower, air-ground integration, internal gap crossing capability and flexibility in supporting Task Force Shoemaker.

Cavalry in Kuwait 1991

The VII (U.S.) Corps ground offensive during Operation DESERT STORM in Kuwait in February 1991 demonstrated the employment of a corps with an armored cavalry regiment providing reconnaissance and security support during major combat operations. The operation involved 2d Armored Cavalry Regiment in support of VII Corps in the Kuwaiti desert. The enemy opposing coalition forces was Saddam Hussein's Iraqi Army. The events prior to Operation DESERT STORM and during the offensive provided an opportunity to analyze a corps-sized formations need for a reconnaissance and security force using the selected criteria of doctrine, capability, and organization.

Doctrine

FM 100-5 (1986), like the preceding capstone operations manuals, prepared the Army to fight a general war against the Soviet Army in central Europe. The manual refined the AirLand

Battle operational concept, first introduced in *FM 100-5 (1982)*. Key to AirLand Battle was attacking the enemy throughout the depth of the battlefield. To regulate the flow of battle against Soviet forces, the Army developed a battlefield organization construct to synchronize simultaneous operations in depth.[64] The manual defined the battlefield organization as deep, close, and rear areas with each associated with either a time or distance factor by echelon of command. The battlefield organization was the Army's echeloned approach to fighting.

For deep operations, the corps had the responsibility to "see the enemy 2d echelon army, attack the follow-on echelons out to 72 hours or 150 kilometers beyond the FLOT, provide near instantaneous information to his units, sustain and reconstitute assigned and designated forces."[65] For close operations, the corps requirement to provide near instantaneous information to his units applied not only to communicating intelligence information from echelons above corps assets, but it also included information gathered from its reconnaissance and security force. The reconnaissance and security force was to provide detailed information about the location and disposition of Soviet units. This was a critical requirement which the Army found necessary during operations against the Iraqi Army.

The 7th (Iraqi) Corps prepared a deliberate defense to destroy Coalition Forces along the Wadi Al Batin approach. The 7th Corps was comprised of five infantry divisions, a tank division, a fires brigade, an air defense brigade, an engineer battalion, and a reconnaissance battalion.[66] The infantry divisions established a main defensive line with the tank division serving as the counterattack force ready to block any penetrations of the main defensive line. The Iraqi Army units were equipped with Soviet T55/T62 tanks and BMP-1 and MTLB armored personnel carriers. In addition to the equipment, the Iraqi Army employed Soviet doctrine in the preparation

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[64] Battlefield organization first appeared in *Field Manual 100-5 Operations*, 1986.

[65] Romjue, *A History of Army 86 Volume II*, 67.

[66] Stephen A. Bourque, *Desert Saber: The VII Corps in the Gulf War* (Ann Arbor, MI: UMI, 1996), 192-193.

and execution of the defense. Although the Iraqi Army was not the large modern Soviet threat, it was a Soviet-modeled enemy similar to the threat the U.S. Army prepared to fight in general war. So applying the AirLand Battle doctrine against the Iraqi Army required few modifications or deviations to the existing operational concept.

The VII (U.S.) Corps concept of operations was a penetration and envelopment of the Iraqi main defensive area along the Kuwaiti border. The operation called for 1st (U.S.) Infantry Division to conduct a deliberate breach in the vicinity of the 26th (Iraqi) and 28th (Iraqi) Infantry Divisions. Following 1st (U.S.) Infantry Division's breach, the 1st (U.K.) Armored Division would conduct a penetration of the Iraqi defensive line. The penetration would allow the 1st (U.K.) Armored Division to attack to destroy the Iraqi second echelon defensive forces. The 1st (U.S.) Infantry Division's breach and 1st (U.K.) Armored Division's attack would fix Iraqi forces to facilitate the execution of VII Corps main effort.[67]

VII Corps main effort was two armored divisions and an armored cavalry regiment poised to exploit a gap in the Iraqi line of defense. The front-line Iraqi divisions failed to tie the western flank of its defensive line to either terrain or another unit. Therefore, VII Corps planned to exploit the 40 kilometer wide gap between the 26th (Iraqi) Infantry Division and 46th (Iraqi) Infantry Division.[68] Once through the gap, the main effort would conduct a movement to contact to locate and destroy Republican Guard Forces in Kuwait. The 2d Armored Cavalry Regiment would play an important role in the VII Corps attack.

VII Corps plan for 2d Armored Cavalry Regiment was as a covering force for the corps main effort. First, the armored cavalry regiment had to clear the zone in front of the 1st and 3d Armored Divisions. For the regiment, clearing meant to "destroy all enemy armor and artillery,

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[67] Robert H. Scales, JR., *Certain Victory: The US Army in the Gulf War* (Fort Leavenworth, KS: US Army Command and General Staff College Press, 1994), 149.

[68] Richard M. Swain, *"Lucky War": Third Army in Desert Storm* (Fort Leavenworth, KS: US Army Command and General Staff College Press, 1994), 104.

but to bypass infantry."[69] Second, the regiment had to locate the Republican Guard's main defensive line. This task required 2d Armored Cavalry Regiment to penetrate the Republican Guard's security zone and locate the main defensive positions.[70] This was important because the reconnaissance and security force had to provide the supported commander with detailed information about the enemy's location and disposition. To regiment's key to success to executing its tasks was the capabilities built into the unit.

Capability

Studies and experiments leading up to the adoption of the AirLand Battle concept influenced the development of capabilities in corps and armored cavalry regiments. The Army 86 and the Army of Excellence studies heavily influenced the capabilities needed by corps and armored cavalry regiments to meet the Soviet threat. The Army 86 study emphasized four areas for corps fighting the Soviet Army on the central European battlefield. The four areas were covering force operations, rear area operations, second echelon battle, and air-land operations.[71] Of particular importance was the covering force operation.

The covering force in offensive operations required a self-contained unit which the study identified as an armored cavalry regiment or a tank heavy task force augmented with artillery, aviation, and engineer support. The role of the covering force was to provide a corps main body with warning time, maneuver space, and information about enemy forces. In the defense, the mission of the covering force was to force the enemy to "concentrate, deploy, and reveal his location, direction, and strength." The covering force had the ability to shape the battlefield

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[69] Steve Vogel, "A Swift Kick," *Army Times*, August 5, 1991, 18.

[70] Scales, *Certain Victory*, 223.

[71] Romjue, *A History of Army 86 Volume II*, 60.

through deception, weight the main effort, serve as an economy of force, or act as the corps reserve due to its capabilities.[72]

The plan for 2d Armored Cavalry Regiment to execute an offensive cover force mission required certain capabilities. First, the mission to clear the zone in front of the 1st and 3d Armored Divisions required cross-country mobility. The open desert terrain required a mechanized reconnaissance and security force with the same cross-country mobility as the two armored divisions. Furthermore, to maintain tempo, the regiment's air-ground integration capability was necessary to enable the air cavalry scouts to screen forward of the ground squadrons.

In addition to mobility, the 2d Armored Cavalry Regiment required protection and firepower in the form of armored vehicles to destroy Iraqi tanks and artillery with direct and indirect fire. The protection and firepower capabilities supported both of the regiment's missions: clear the zone of attack and penetrate the enemy's security zone and locate the main defensive line. Overall, the capabilities of mobility, firepower, protection, and air-ground integration for the covering force were the same general capabilities required of armored cavalry regiment during the Vietnam War era. The Army built these capabilities into a combined arms unit by including tanks, armored personnel carriers, artillery, aviation, engineers, and air defense into the regiment's design.

Organization

The Army of Excellence design was a division-based force with the corps echelon serving as the operational and doctrinal focus of the force.[73] The design evolved from the Army

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[72] Romjue, *A History of Army 86 Volume II*, 68.

[73] John L. Romjue, *The Army of Excellence: The Development of the 1980s Army* (Washington, D.C.: Center of Military History, 2004), 85.

86 structure which proved too costly for the Army to implement.[74] For armored cavalry regiments in the Army of Excellence design, the regiments consisted of three ground squadrons, an aviation squadron, an air defense artillery battery, a military intelligence company, an engineer company, a chemical biological radiation nuclear company, and a support battalion.[75]

The planners in the Army of Excellence study set the rules of allocation for armored cavalry regiments to corps. The allocation followed the battlefield organization framework; planners aligned one armored cavalry regiment to each of the five corps in accordance to the deep, close, and rear construct. At the completion of initial rules of allocation study, the Army eliminated two armored cavalry regiments not aligned with a corps.[76] There were more armored cavalry regiments than corps.

In Operation DESERT STORM, the 2d Armored Cavalry Regiment did not have any modifications to its basic organization and equipment. The regiment's combined arms structure enabled VII Corps to build an offensive covering force by task-organizing 210th Field Artillery Brigade and 2-1st Aviation Battalion to the regiment.[77] The final task organization prepared the regiment for the beginning of VII Corps attack.

Operation DESERT STORM

On 23 February 1991, the 2d Armored Cavalry Regiment crossed the border berm into Kuwait as the covering force for the VII Corps attack during Operation DESERT STORM.[78]

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[74] The Army end strength had to increase from 780,000 to 836,000 to achieve the Army 86 design. The 780,000 end strength represented the congressional imposed ceiling on strength. Romjue, *The Army of Excellence*, 29.

[75] McGrath, *Scouts Out!*, 161.

[76] Romjue, *The Army of Excellence*, 39.

[77] 2-1st Aviation Battalion was from the 1st Armored Division. Scales, *Certain Victory*, 224. Bourque, *Jayhawk!*, 252-253.

[78] Stephen A. Bourque, *Jayhawk! The VII Corps in the Persian Gulf War* (Washington, DC: Department of the Army, 2002), 200.

Although the actual ground invasion day was 24 February, the armored cavalry regiment conducted a route reconnaissance through the berm to determine the trafficability of the route and conduct a reconnaissance by fire against suspected enemy locations. In addition, the armored cavalry regiment covered the corps engineers as these units cut passage lanes through the berm for the 1st (U.S.) and 3d (U.S.) Armored Divisions.[79]

The armored cavalry regiment led the armored divisions into enemy held territory which served two purposes for the VII Corps.[80] The regiment conducted a zone reconnaissance which provided information on the enemy and terrain and enabled the corps commander to preserve combat power as the regiment destroyed enemy security zone forces. During its zone reconnaissance the regiment fought through enemy resistance from dismounted infantry and armored vehicles to include armored personnel carriers and T55 tanks. In each of these actions, the regiment quickly destroyed the enemy and continued the advance to find its main reconnaissance objective, the Republican Guard's main defensive positions.

On 25 February, Lieutenant General Frederick Franks, VII Corps Commander, flew to the regiment's tactical operations center as part of his battlefield circulation. Lieutenant Colonel Scott Marcy, 3d Squadron Commander, recalled Lieutenant General Franks wanted to know detailed information about the enemy and situation. According to Lieutenant Colonel Marcy, Lieutenant General Franks "wanted to know the nature of the contact, the nature of the threat. He wanted to know what was going on, how dangerous these guys were, (and) who they were." As the corps reconnaissance and security force, the regiment was able to provide the detailed information the corps commander needed to help him make his biggest decision of the war; where and when to commit the 1st (U.S.) and 3d (U.S.) Armored Divisions.[81]

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[79] Vogel, "A Swift Kick," 18.

[80] Bourque. *Jayhawk! The VII Corps in the Persian Gulf War*, 192.

[81] Vogel, "A Swift Kick," 28.

On 26 February, VII Corps issued a fragmentary order to commit the 3d Armored Division into the fight. The order required the 2d Armored Cavalry Regiment to break from its northeastern advance and orient its direction of attack east. The new direction of attack allowed the 3d Armored Division to pass on the regiment's left flank instead of conducting a passage of lines. Furthermore, regiment's mission remained to find the Republican Guard's main defensive line.[82] The regiment's change of direction led to the famous Battle of 73 Easting.

During mid-morning of 26 February at approximately 0700 hours, the regiment made contact with elements of the Republican Guard security zone. As the morning wore on, a desert shamal with forty mile per hour winds reduced visibility down to 200 meters in the regiment's area. Despite the poor weather, the regiment was able to continue its mission to destroy security zone forces and find the main defensive positions. By approximately 1200 hours, the regiment found the Tawakalna Division's main line of defense.[83]

At approximately 2230 hours on 26 February with the enemy's security zone forces destroyed, the 1st Infantry Division began its passage of lines through the 2d Armored Cavalry Regiment. Once the 1st Infantry Division completed the passage of lines, the regiment transitioned from a covering force to the corps reserve thus ending the regiment's fight during the major combat operations phase of Operation DESERT STORM.

At the conclusion of the war, the U.S. liberated Kuwait after a six week air campaign and a short intense ground war lasting approximately one hundred hours. Coalition forces destroyed a large section the Iraqi Army with Iraqi losses numbering thirty divisions and 4,000 tanks destroyed at a cost of approximately 300 U.S. Soldiers' deaths.[84] The 2d Armored Cavalry

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[82] Vogel, "A Swift Kick," 28.

[83] Vogel, "A Swift Kick," 30.

[84] Robert M. Citino, *From Blitzkrieg to Desert Storm: The Evolution of Operational Warfare* (Lawrence, KS: University Press of Kansas, 2004), 275-276.

Regiment organized and equipped to fight the Soviet Army in central Europe proved extremely valuable as a corps reconnaissance and security force against the Iraqi Army in Kuwait.

Assessment of Cavalry in Kuwait 1991

Doctrine, capability, and organization provided the VII Corps with a land-based reconnaissance and security organization for offensive operations during Operation DESERT STORM. *FM 100-5 (1986)* focused the Army on fighting and winning a general war against the Soviet Army in central Europe. The operational concept drove the Army to retain reconnaissance and security capabilities for the corps. According to General Robert Scales, "AirLand Battle proved remarkably suitable to the unique circumstances of the theater."[85] The concepts and constructs such as battlefield organization provided VII Corps with the tools needed to defeat a Soviet-modeled enemy in Kuwait. Although the terrain differed from the rolling hills of western Germany, the desert terrain in Kuwait offered better mobility for the heavy mechanized force that comprised VII Corps.

The Soviet threat required corps to have a dedicated land-based reconnaissance and security force. The armored cavalry regiment provided corps with the capability to conduct reconnaissance and security twenty-four hours a day and in all weather conditions. During the operation, the corps used the 2d Armored Cavalry Regiment as a covering force to protect the main effort comprised of two armored divisions. The regiment not only preserved the combat power of the main effort but it also allowed VII Corps to maintain a steady tempo of attack. This was due to the fact the regiment cleared the axis of advance for the main effort which prevented the enemy from disrupting VII Corps attack.

The corps required a reconnaissance and security capability to protect the main body during the attack and to identify the Republican Guard's main defensive area. Within this

[85] Scales, *Certain Victory,* 154.

reconnaissance and security force, the Army built firepower, mobility, protection, and air-ground integration. These capabilities enabled the reconnaissance and security force to conduct an offensive covering mission against an armored enemy in open desert terrain.

The combined arms structure of the armored cavalry regiments allowed it to perform a range of missions in support of VII Corps. Prior to executing the offensive operation, the regiment performed a route reconnaissance, a reconnaissance by fire, and a defensive covering mission in support of the border berm breaches. Once the offensive operation started, the regiment's primary mission was as a covering force for the VII Corps main effort. The combined arms structure enabled VII Corps to build the covering force around the armored cavalry regiment by providing additional artillery and attack aviation support. The regiment, built to fight the Soviet Army, proved valuable in defeating a Soviet-modeled enemy.

Cavalry in Iraq 2003

The V (U.S.) Corps ground offensive during Operation IRAQI FREEDOM in March 2003 demonstrated the employment of a corps without a dedicated land-based reconnaissance and security organization during major combat operations. The events prior to Operation IRAQI FREEDOM and during the offensive provide an opportunity to analyze a corps-sized formation operating without a reconnaissance and security force using the selected criteria of doctrine, capability, and organization.

Doctrine

The Army's operational concept leading into Operation IRAQI FREEDOM was full spectrum operations, first introduced in *FM 3-0 Operations (2001)*. The manual did not identify a specific threat to prepare for, nor did it describe the type terrain the Army would encounter; it was

a doctrine created without a well-defined enemy or a specific strategy.[86] The Army no longer focused on fighting the Soviet Army in Europe. Instead, *FM 3-0 (2001)* directed the Army to prepare for major theater wars, smaller-scale contingencies, and peacetime military engagements anywhere in the world.[87] The lack of a central threat on a designated battlefield was similar to the 1962 version of *FM 100-5.* Despite similarities, *FM 3-0 (2001)* presented major changes from doctrine contained in *FM 100-5 (1962)*, *FM 100-5 (1982)*, and *FM 100-5 (1986).*

The major changes in doctrine which had an impact on corps reconnaissance and security were changes to the level of command focus and the battlefield organization. The corps-level was no longer the primary focus for Army operations in *FM 3-0 (2001).* Just as there was not an identifiable enemy, a specific strategy or operational concept in doctrine, the manual also did not focus on a single force size or echelon as past versions.[88] This change reflected the emphasis the Army Chief of Staff, General Eric K. Shinseki, placed on rapid deployment.[89] Doctrine focused less on corps and placed more emphasis on brigades which may have undermined the requirement for corps reconnaissance and security. This was only one area that had a possible impact on reconnaissance and security for corps. The other area the manual changed was the battlefield organization construct.

FM 3-0 (2001) adopted a purpose-based battlefield organization to provide a construct better suited for the range of operations than the AirLand Battle construct. The purpose-based

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[86] The AirLand Battle concept in *FM 100-5 (1982)* is an example of a strategy articulated in doctrine. The strategy guides the employment of the U.S. Army against a specific enemy, on a projected battlefield, and under certain battlefield conditions such as a nuclear environment. Michael J. Burke, "FM 3-0 Doctrine for a Transforming Force," *Military Review* (March-April 2002): 92.

[87] William M. Steele and Robert P. Walters, "Training and Developing Army Leaders," *Military Review* (July-August 2001): 2.

[88] The audience was battalion-level leaders to corps-level leaders to include both officers and non-commissioned officers. Burke, "FM 3-0 Doctrine for a Transforming Army," 92.

[89] The deployment standard was a brigade able to deploy anywhere in the world within 96 hours and an entire division in 120 hours. US Army Training and Doctrine Command, *Transforming the Army*. Richard D. Liebert, David L. Grange, and Chuck Jarnot, "Airmechanization," *Military Review* (July-August 2001): 11.

battlefield organization used decisive, shaping, and sustaining operations to account for noncontiguous areas of operations. In addition, the new construct applied to all echelons of command to provide units involved in small scale contingencies with a framework to organize forces. Although the Army adopted the new construct, it did not eliminate the deep, close, and rear battlefield organization from AirLand Battle doctrine.[90] Whether intentional or not, the change signaled a departure from the Army's echeloned approach to fighting and may have had an impact on armored cavalry regiments.

Field Manual 3-90 Tactics described the echeloned approach in an attack which focused on a five-step sequence. Those steps were gain and maintain enemy contact, disrupt the enemy, fix the enemy, maneuver, and follow through.[91] Reconnaissance and security organizations had a prominent role in the first two actions: gain and maintain contact and disrupt the enemy. Gain and maintain contact required a layered approach for reconnaissance and security beginning with corps reconnaissance. Corps determined the disposition, composition, and movement of enemy forces through manned reconnaissance. The next role was disrupting the enemy, which involved attacking one or more parts of the enemy force to allow the friendly commander to seize, retain, and exploit the initiative and to take advantage of enemy vulnerabilities. The disruption effort occurred at division level or higher due to lower level units not possessing the necessary capabilities such as reconnaissance.[92] The remaining three steps in the attack did not require a

[90] FM 3-0 retained the older deep, close, and rear organization but assigned them strictly spatial qualities. Deep, close, and rear areas helped commanders to describe where shaping, decisive, and sustaining operations may occur, particularly in operations characterized by linear action and contiguous area of operations. Burke, "FM 3-0 Doctrine for a Transforming Force," 95-96.

[91] Department of the Army, *Field Manual 3-90 Tactics* (Washington, DC: 2001), 5-14- 5-28.

[92] The disruption effort required capabilities such as reconnaissance, target acquisition, intelligence analysis, and target attack to engage enemy forces not committed in close combat. In the Army of Excellence design, brigades did not possess the assets needed to disrupt the enemy as described in doctrine. Department of the Army, *Field Manual 3-90*, 5-16-5-17.

reconnaissance and security force.[93] A departure from the echeloning of forces in an attack may have had an impact on operations in 2003, but it was one of several changes to doctrine.

As discussed in the preceding paragraphs, *FM 3-0 (2001)* brought several changes into doctrine which the Army used to prepare for future conflicts. Since the manual did not identify a specific adversary, the Army prepared to fight a range of adversaries from nations, non-state actors, and transnational groups. These adversaries presented a combination of "heavy conventional units to adaptive, assymetrical forces".[94] Almost two years after the publication of *FM 3-0 (2001)*, the Army faced Iraq which had a conventional army and fanatical militias.

In 2003, V (U.S.) Corps faced a large Iraqi force which defended in depth along the most likely avenues of approach to Baghdad. Iraq had seventeen regular army divisions with 280,000-350,000 soldiers, six Republican Guard divisions with 50,000-80,000 soldiers, a Special Republican Guard force with 15,000 soldiers, and paramilitary forces which included the Saddam Fedayeen and Ba'ath Party militia. The army had a mix of tanks, armored personnel carriers, artillery, and a small number of rotary-winged aircraft for attack aviation support.[95] In contrast, the paramilitary forces were equipped with small arms and mortars. The Iraqi Army and militias were the type of enemy doctrine prepared the U.S. Army to fight. Despite major changes to doctrine in 2001, the Army had not dismantled capabilities of corps reconnaissance and security.

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[93] The remaining three steps of an attack are fix the enemy which allows friendly units to isolate an enemy force from an objective with the minimum amount of force. Maneuver involves gaining a position of relative advantage over the enemy to allow the friendly force to seize, retain, and exploit the initiative. Finally, follow through which are actions taken after seizing an objective. The follow through actions are continue the attack or terminate the offensive operation. Department of the Army, *Field Manual 3-90*, 5-27.

[94] Department of the Army, *Field Manual 3-0 Operations* (Washington, DC: 2001), 1-8.

[95] Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom* (Fort Leavenworth, KS: Combat Studies Institute Press, 2004), 99-100, 150.

Capability

General Shinseki's emphasis on rapid deployment resulted in the need for the Army to transform to smaller and lighter forces able to deploy quickly to stabilize a situation in another country. The Army's emphasis shifted from improving the capabilities of corps to improving the capabilities of brigades. Although the Army was moving toward more deployable formations, the capabilities resident in the armored cavalry regiment were residual elements from the Army of Excellence design and the AirLand Battle Concept.

The armored cavalry regiment kept its firepower, mobility, protection, and air-ground integration capabilities required to perform reconnaissance and security for a corps. Despite changes in doctrine, the corps and armored cavalry regiments remained capable of performing the same reconnaissance and security missions in 2003 as it did in 1991.

Organization

During the Army's down-sizing period in the early 1990s, the Army reduced the number of armored cavalry regiments to one light cavalry regiment, one heavy cavalry regiment, and one cavalry regiment designated as the permanent opposing force at the National Training Center at Fort Irwin, California.[96] Structurally, the light cavalry regiment was the same as the heavy cavalry regiment; the major difference was in the equipment.[97] The heavy armored cavalry regiment's organization was a headquarters and headquarters troop, three ground cavalry squadrons, an aviation squadron, and a support squadron. In addition, the regiment also had its combat enablers, like chemical, air defense, military intelligence, and engineers. In the ground

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[96] Cameron, *To Fight or Not to Fight?*, 353.

[97] In the light cavalry regiment, the Army replaced its armored tracked vehicles, M1 Abrams Tanks and M3 Cavalry Fighting Vehicles, with wheeled vehicles to create an organization that was faster to deploy than the heavy cavalry regiment. The light cavalry regiment consisted of three ground cavalry squadrons, an aviation squadron, a military intelligence company, an air defense company, and an engineer company. McGrath, *Scouts Out!*, 164.

cavalry squadrons, each had a tank company, an artillery battery, and three troops. Each troop had two tank platoons, two scout platoons, and a mortar section.[98] Throughout the 1990s to Operation IRAQI FREEDOM, the heavy armored cavalry regiment retained its Army of Excellence structure with changes occurring only to the equipment within the regiment.

In 2003 prior to Operation IRAQI FREEDOM, the Army had four active corps in the force but only two cavalry regiments. The Army did not have enough cavalry regiments to support each corps but the Army did have enough to support the invasion of Iraq. The Army had the 2d Armored Cavalry Regiment (Light) and the 3d Armored Cavalry Regiment available to support V Corps and Third Army for the invasion of Iraq.[99] However, neither regiment was in theater when the offensive started which left V Corps with a difficult choice regarding reconnaissance and security.

Operation IRAQI FREEDOM

On 20 March 2003, V Corps launched its offensive operation into Iraq without a dedicated land-based reconnaissance and security force. With the ground and air campaign beginning at relatively the same time, the corps did not the luxury of time to develop an accurate assessment of the enemy's locations and intentions. In fact, the 3d Infantry Division did not expect serious opposition in southern Iraq based on division and corps intelligence assessments.[100] V Corps needed to confirm or deny the enemy's dispositions and intentions along 3d Infantry Division's axis of advance. Following completion of the initial attack to An Nasiriyah, the corps also needed a force capable of providing security for the lines of

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[98] Cameron, *To Fight or Not to Fight?*, 353-354.

[99] V Corps served as the Army Forces Headquarters task organized with five divisions. V Corps operated under the Third Army which U.S. Central Command designated as the Combined Forces Land Component Command. Gregory Fontenot, E.J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom* (Fort Leavenworth, KS: Combat Studies Institute Press, 2004), 42.

[100] Jim Lacey, *TAKEDOWN: The 3d Infantry Division's Twenty-One Day Assault on Baghdad* (Annapolis, MD: Naval Institute Press, 2007), 45-46. Fontenot, Degen, and Tohn, *On Point*, 126.

communication. The one unit capable of providing corps reconnaissance and security was the 3d Armored Cavalry Regiment; however, the regiment had not arrived into theater.[101] As a result, the 3d Infantry Division conducted operations without the additional layer of reconnaissance and security offered by a corps.

The 3d Infantry Division provided its own reconnaissance and security for the series of tasks beginning at the border. Task Force 3d Battalion, 15th Infantry (TF 3-15) established a ten kilometer wide security zone to protect the berm breaching operation and main body forces moving through the lanes.[102] After the division cavalry squadron passed through the lanes, the squadron conducted a passage of lines with TF 3-15 which ended the task force's security mission.[103] The division also provided its own security in other areas.

V Corps did not create a covering force to support the division, which prevented the corps from shaping the battlefield with reconnaissance and security. The 3d Infantry Division relied on its division cavalry, 3d Squadron, 7th Cavalry (3-7 Cavalry), as the advance guard for the 2d Brigade Combat Team to As Samawah, Iraq. The 1st and 3d Brigade Combat Teams operated without the armored cavalry regiment or the division cavalry squadron. The brigade combat teams relied on their internal brigade reconnaissance troops for reconnaissance as the units moved toward An Nasiriyah, Iraq. Without a corps reconnaissance and security force, the division lacked an accurate assessment of the enemy's intentions.

The fight at Tallil Air Base was one example of the lack of intelligence slowing the operational tempo. The division ordered the 3d Brigade Combat Team to attack in zone to defeat the 11th (Iraqi) Division and seize crossing sites over the Euphrates River in the vicinity of An

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[101] V Corps did not establish a reconnaissance and security force for the invasion due to the General Tommy R. Frank's decision to invade before all forces arrived in theater. Fontenot, Degen, and Tohn, *On Point*, 94.

[102] Fontenot, Degen, and Tohn, *On Point*, 111.

[103] Task Force 3-15 rejoined 2d Brigade after the brigade crossed the border.

Nasiriyah.[104] Tallil Air Base and the crossing sites were critical to controlling the line of communication to support the corps movement to Baghdad and the 1st (U.S.) Marine Expeditionary Force attack into An Nasiriyah. The brigade combat team had to travel approximately 170 kilometers from the border to Tallil Air Base to execute its attack.[105]

Prior to the attack, V Corps attempted to shape the battlefield with attack aviation and intelligence, surveillance, and reconnaissance assets. On the night of 20-21 March, the corps attempted a deep attack against the 11th (Iraqi) Division by an attack aviation regiment, but poor visibility conditions caused the aviation commander to abort the mission.[106] The next day, 21 March, V Corps ordered their attack aviation companies into the Tallil area to engage the 11th Division. During one such engagement, the attack helicopter pilots provided early warning to TF 2-69 by reporting enemy tanks on OBJECTIVE CLAY. Although air-ground integration occurred in this instance, there was no planned air-ground integration between the brigade combat team and the division's 4th Aviation Brigade or corps aviation assets during the battle.[107] As a result, the brigade combat team did not receive timely information on the enemy's disposition or a battle

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[104] 3d Infantry Division (Mechanized) Operation IRAQI FREEDOM Lessons Learned Brief.

[105] The 3d Brigade Combat Team's concept of operations was to conduct a tactical movement from the Kuwait-Iraq border to Assault Position BARROWS near Tallil Air Base. From the assault position, the brigade reconnaissance troop was to establish a security zone near An Nasiryah to conduct reconnaissance on Tallil Air Base and the bridge over the Euphrates River west of the city. Task Force 2d Battalion, 69th Armor Regiment (TF 2-69) was to seize the river crossing designated as OBJECTIVE CLAY, Task Force 1st Battalion, 30th Infantry Regiment (Mechanized) (TF1-30) was to secure Tallil Air Base designated as OBJECTIVE FIREBIRD, and Task Force 1st Battalion, 15th Infantry Regiment (Mechanized) (TF 1-15) was to seize OBJECTIVE LIBERTY which was the location of an enemy tank company. The brigade planned to initiate the attack by late afternoon or early evening after all of its maneuver units arrived at the assault position. However, on the morning of 21 March, 3d Infantry Division ordered the brigade to attack early. Interview with Colonel Daniel Allyn, Commander, 3d Brigade Combat Team, 3d Infantry Division (Mechanized). Fontenot, Degen, and Tohn, *On Point*, 117-119.

[106] The 11th (U.S.) Attack Helicopter Regiment's mission was to conduct a deep attack to destroy the 11th (Iraqi) Division's artillery and tanks to provide 3d (U.S.) Infantry Division freedom of maneuver and secure its left flank. Fontenot, Degen, and Tohn, *On Point*, 109-110.

[107] In other instances, Task Force 2-69 observed attack aviation assets engaging unknown targets. However, neither the task force nor the brigade combat team received intelligence reports from the aviation unit which provided the disposition and battle damage assessment of the 11th (Iraqi) Division. Department of the Army, "Task Force 2-69, 3d Infantry Division (Mechanized), Operation IRAQI FREEDOM After Action Report (April 2003).

damage assessment. To provide information to the division, V Corps relied on unmanned aerial systems, Special Forces, and operatives from the Central Intelligence Agency to provide collection on objectives vicinity of Tallil Air Base. However, there was no clear picture of the enemy situation or the enemy's intentions.

The 3d Brigade Combat Team initiated its attack at 1400 on 21 March without the benefit of corps or division shaping the battlefield with a ground reconnaissance and security force. The brigade relied on corps and division intelligence estimates which ranged from the 11th (Iraqi) Division prepared to defend from established battle positions to the Iraqi division completely collapsing and offering little to no resistance.[108] Without an accurate picture of the enemy's disposition and intentions from division or corps, the brigade combat team relied on its brigade reconnaissance troop.

The brigade reconnaissance troop was a wheeled vehicle-based organization whose vehicles did not provide its occupants the same level of protection as tanks or armored personnel carriers. The troop had to rely on stealth to infiltrate to observation points overlooking the objectives and surveilled targets from long distances using long range advanced scout surveillance systems. In essence, the troop could not fight for information to provide the brigade combat team with an accurate picture of the 11th (Iraqi) Division.

Although the brigade combat team used its reconnaissance troop, the three task forces had to develop the enemy situation individually on each of the objectives. In other words, the brigade combat teams and subordinate battalions had to conduct the five-step sequence for

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[108]Third Brigade received reports from the Third (U.S.) Infantry Division headquarters which assessed the 11th (Iraqi) Infantry Division would capitulate without a fight. However, immediately prior to the battle, the brigade received several reports which changed the enemy situation "radically". Center for Army Lessons Learned, Interview with Colonel Daniel Allyn. Operatives from the Central Intelligence Agency provided intelligence assessments to the 3d Infantry Division regarding the likely capitulation of the 11th Iraqi Division. However, as the brigade combat teams approached Tallil Air Base the division did not receive any additional intelligence about the 11th Division's intentions. Michael R. Gordon and Bernard E. Trainor, *Cobra II: The Inside Story of the Invasion and Occupation of Iraq* (New York, NY: Pantheon Books, 2006), 199-200. Fontenot, Degen, and Tohn, *On Point*, 116-117.

executing an attack without a higher headquarters layer of reconnaissance and security. The result was a prolonged series of engagements with the enemy's dismounted infantry and tanks which started on the afternoon of 21 March. The brigade combat team finally seized the last of its objectives, OBJECTIVE CLAY, in the early morning of 22 March. The brigade combat team in conjunction with attack aviation destroyed approximately fifteen tanks, six BTR 70 infantry fighting vehicles and killed an unknown number of dismounted infantry at the cost of one soldier wounded in action.[109] The attack was successful, but it required the brigade combat team over fifteen hours to complete its mission.

After the brigade combat team completed its mission at An Nasiriyah, the unit transitioned to route security. The brigade combat team deployed two battalion task forces to isolate As Samawah, while the reconnaissance troops deployed along the highway linking An Nasiriyah and As Samawah; a distance of approximately one hundred kilometers.[110] By 29 March, the 2d Brigade Combat Team from the 82d Airborne Division relieved 3d Brigade Combat Team of the security mission. On 8 April, 2d Armored Cavalry Regiment (Light) arrived in Iraqi to support 2d Brigade Combat Team's security mission.[111] Thus almost three weeks after the invasion began, the first cavalry regiment arrived in theater to conduct one of the primary missions: route security.

Assessment of Cavalry in Iraq 2003

The U.S. Army was in a period of transition prior to Operation IRAQI FREEDOM. Corps and armored cavalry regiments still had the residual capabilities and organization that were resident in the Army of Excellence design. The armored cavalry regiment still possessed the

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[109] Fontenot, Degen, and Tohn, *On Point*, 117-121.

[110] Fontenot, Degen, and Tohn, *On Point*, 132.

[111] Lieutenant General McKiernan attached 2d Armored Cavalry Regiment (Light) to the 82d Airborne Division. Fontenot, Degen, and Tohn, *On Point*, 220.

ability to conduct all forms of reconnaissance and security in support of a corps. Doctrine was a different matter. *FM 3-0 (2001)* changed the echelon of command focus and battlefield organization which removed the focus of Army operations from corps and armored cavalry regiments. Doctrine did not stress corps fighting an echeloned battle against an adversary such as the Soviet Army. This in turn had an impact on cavalry regiments, which the Army built and retained in the force to fight the corps close fight. Regardless of doctrine, capability, and organization, V Corps attacked without a land-based reconnaissance and security force because the 3d Armored Cavalry Regiment had not yet deployed to Kuwait.

Proving a negative example is always difficult due to a number of extenuating circumstances revolving around the original incident. In the case of V Corps and Operation IRAQI FREEDOM, there are several instances in which a land-based reconnaissance and security organization supporting the corps may have proved useful. During the attack to seize the Tallil Air Base, a corps reconnaissance and security organization may have developed the situation with 11th (Iraqi) Division to determine its disposition and intentions. The information may have preserved 3d Brigade Combat Team's combat power or allowed the brigade to seize its objectives earlier. However, as the case unfolded, V Corps did not have reconnaissance and security organization, so the 3d Brigade Combat Team conducted the five-step sequence for an attack without a higher headquarters reconnaissance and security force.

The decision to initiate Operation IRAQI FREEDOM, before closure of the armored cavalry regiment in theater, had a significant impact on V Corps ability to conduct reconnaissance and security. The two most capable forces, 2d Armored Cavalry Regiment and 3d Armored Cavalry Regiment, were in transit to the theater when General Franks gave the order to start the operation. V Corps did not have a reconnaissance and security formation available to support its operations which directly impacted the 3d Infantry Division. During Operation DESERT STORM, VII Corps had several weeks, in addition to the six week air campaign phase, to locate, monitor, and assess the Iraqi Army's intentions. V Corps did not have that luxury.

The 3d Infantry Division had to provide its own reconnaissance and security from the preparation for the operation until 2d Armored Cavalry Regiment (Light) arrived in theater. The recurring theme throughout the operation was the lack of intelligence on the enemy facing the division. The three maneuver battalions under the brigade combat team had to develop the enemy situation and seize their objectives without the support of a higher-level reconnaissance and security force. The enemy also presented other problems for the division.

The enemy had an impact on the lines of communication which caused the division to reallocate combat power to route security. The nature of the enemy's attacks and the decision to bypass the cities presented a major threat to the long lines of communication. In one instance, 3d Brigade Combat Team had to secure the route between Tallil Air Base and As Samawah which effectively removed the brigade combat team from 3d Infantry Division's attack. It was not until other forces flowed into theater days later, namely 82d Airborne Division and 2d Armored Cavalry Regiment, before 3d Brigade Combat Team could rejoin the division attack. With the lines of communication in jeopardy, a corps-level reconnaissance and security force would have alleviated the lines of communication security problem and preserved the division's combat power.

The armored cavalry regiment possessed the capabilities and organization to conduct reconnaissance and security for V Corps. However, decisions and assessments precluded the use of a regiment in support of the corps ground offensive. It is difficult to determine whether the changes incorporated in doctrine had an impact on the decision to execute the offensive without an armored cavalry regiment. Regardless, the V Corps operation offers many areas to study the impact the lack of a corps reconnaissance and security force had on the operation.

Recommendation and Conclusion

The Army's transformation to modularity had a significant impact on a corps' ability to gather information and protect the force during major combat operations. Historically, the Army

dedicated an armored cavalry regiment to a corps for reconnaissance and security until the Army made the decision to eliminate the regiments from the force structure. This decision created a gap in a corps ability to conduct reconnaissance and security. The purpose of this study was examine that gap and determine if corps-sized formations needed a dedicated land-based organization optimized for reconnaissance and security in major combat operations.

After extensive research using doctrine, capability, and organization to analyze corps operations in three different eras, the answer is yes. Corps need a dedicated force with the capabilities of mobility, firepower, protection, air-ground integration, gap-crossing, and flexibility organized in a combined arms formation to conduct reconnaissance and security in all weather conditions, twenty four hours a day during major combat operations. In order for the Army to reestablish a corps reconnaissance and security capability in the force requires a revision to corps and operations doctrine. The Army needs doctrine which emphasizes the corps responsibility to shape the battlefield, with reconnaissance and security, for subordinate formations. Experience provides solid evidence to support a dedicated reconnaissance and security force for corps.

The U.S. Army's experience in Cambodia in 1970 and Kuwait in 1991 demonstrated the importance a corps reconnaissance and security organization had during the execution of division and corps attacks. Regardless of the terrain or weather conditions, the armored cavalry regiments supporting Task Force Shoemaker and VII Corps, respectively, were able to locate the enemy and develop the situation through contact.

The Army's experience has also shown the consequences of corps operating without a reconnaissance and security force. A corps without a dedicated reconnaissance and security organization lacked the ability to gather detailed information on the enemy and protect the force. During Operation IRAQI FREEDOM, technical intelligence, surveillance, and reconnaissance assets were unable to meet the 3d Infantry Division's information needs in the fluid combat environment. Furthermore, 3d Infantry Division and V Corps did not have a layered reconnaissance and security effort to confirm or deny the early intelligence assessments on Iraqi

Army forces. The result was not only a lack of accurate intelligence on the 11th (Iraqi) Division at An Nasiriyah prior to 3d Brigade Combat Team's attack, but, more importantly, the brigade had to execute the attack with limited ground reconnaissance support from V Corps.

Modular corps will face similar difficulties in shaping the battlefield for its subordinate units. Without a dedicated reconnaissance and security organization at the corps-level, Army formations will require divisions and brigade combat teams to conduct the five-step attack sequence with limited means to gain and maintain contact. This means divisions or brigade combat teams will have to gain and maintain contact using the same forces that disrupt, fix, maneuver, and follow through. Conducting each of these actions, without higher headquarters support, may impact tempo as described in An Nasiriyah in 2003 or overtax the modular brigade combat teams. To prevent a similar situation from arising in major combat operations, this study recommends several solutions based on the analysis of the three case studies.

Observations from the doctrine, capability, and organization criteria guide recommendations for the future of corps reconnaissance and security. Doctrine contained in the Army's operations manual must focus on two key items: address the manual to the corps level of command and emphasize the echelonment of forces in an attack. By focusing on the four items mentioned above, the Army will have a clearer understanding of a corps reconnaissance and security requirement in major combat operations. Doctrine must continue to drive capabilities development.

The capabilities for the reconnaissance and security force will remain constant as in past Army designs. Mobility, firepower, protection, air-ground integration, gap-crossing, and flexibility enable a reconnaissance and security force to fight for information against an enemy equipped with armored vehicles. In Operations TOAN THANG 43, DESERT STORM, and IRAQI FREEDOM, these capabilities proved critical to the execution of reconnaissance and security against a completely different enemies and terrain. The organization of reconnaissance and security units is as important as the capabilities identified above.

The organization for the reconnaissance and security force must remain a combined arms structure, and the Army must revise the allocation rules. The combined arms structure enables the reconnaissance and security force to operate independently of a corps main body, which is necessary for early warning and developing the enemy situation. As for a revision of the rules of allocation, the Army must designate units to perform reconnaissance and security for corps. This move is necessary to ensure corps and designated units establish a habitual relationship. The recommendations categorized by doctrine, capability, and organization provide the Army with items to consider as it continues the transformation to modularity.

Although transformation in its final stages, the Army is still in a period of transition between the Army of Excellence and Modularity in terms of doctrine, organization, material, and leadership. As a result, the Army may not have experienced the full impact of a brigade-centric force on corps and division operations. Corps reconnaissance and security is one area for concern which the Army must contend with in future operations. Modularity may have a similar impact on other areas in the Army's force structure and operations. The Army may benefit from a thorough analysis of the impact the brigade-centric force has on the warfighting functions, tactics, and material procurement.

APPENDIX 1- Background of Corps and Armored Cavalry Regiments

To fully understand the corps need for an armored cavalry regiment in major combat operations requires an explanation of the origin of the corps and corps cavalry, the role of corps in major combat operations, units capable of performing reconnaissance and security. The background assists in understanding the reason why corps organizations without a dedicated reconnaissance and security force is an important issue in the Army.

Corps as a standard military formation originated in France in late the 1790s by the French Army. The corps provided command and control of multiple divisions. Although initially introduced in the 1790s, the formal creation of the corps organization did not occur until March 1800.[112] At that time, Napoleon established the first corps formations as self-contained units that had the ability to fight independently for twenty-four hours.[113] The corps consisted of infantry, cavalry, and artillery which gave it the direct and indirect fire aspects of close combat as well as reconnaissance and security capabilities.[114] Napoleon adeptly used his cavalry forces to gather intelligence and screen the main body of his force during campaigns in the late 1700s and early 1800s.[115] The French Army's adoption and successful use of the corps formation influenced other countries to build similar formations.

In the United States, Union and Confederate forces created the corps formation during the Civil War. The structure of the initial corps structures in both forces lacked the combined arms

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[112] Robert M. Epstein, *Napoleon's Last Victory and the Emergence of Modern War* (Lawrence, KS: University of Press of Kansas, 1994), 17-18, 23-24.

[113] David G. Chandler, "Napoleon, Operational Art, and the Jena Campaign," in *Historical Perspectives of the Operational Art,* ed.Michael D. Krause and R. Cody Phillips (Washington, DC: Center of Military History, 2007), 32.

[114] "Close combat is warfare carried out on land in a direct fire fight, supported by direct, indirect, and air-delivered fires." Department of the Army, *Field Manual 3-0 Operations* (Washington, DC: Government Printing Office, 2008), 1-17.

[115] David G. Chandler, "Napoleon, Operational Art, and the Jena Campaign," 32.

capability found in French Army's corps. The Union corps did not possess organic cavalry or artillery.[116] In the Confederate corps, the formation had a separate cavalry division but it did not have organic artillery.[117] However, by the end of the Civil War, the Union and Confederate Armies restructured their corps formations to include cavalry and artillery units.[118] The corps now had the capability to perform close combat and reconnaissance and security. The corps organization created in the Civil War served as the basis for future corps organizations within the U.S. Army.

Since the Civil War to the end of World War II, the U.S. Army had employed corps formations and cavalry regiments in several types of combat operations. These operations included counterinsurgency operations in the Philippine-American War to major combat operations in World War I and World War II. Throughout these deployments, the corps remained a self-contained force with maneuver forces, artillery, logistics, as well as reconnaissance and security. The corps organization and mission remained relatively unchanged since the end of World War II.

The corps and armored cavalry regiments executed Operation DESERT STORM under the Airland Battle operational concept with great success; however, since 1991, the Army modified its operational concept and structure. Starting with transformation in 2004, corps became stand-alone headquarters without organic subordinate forces.[119] Although transformation changed the corps structure, the Army did not change the corps primary tasks. The corps has three goals in full spectrum operations: extend the operational reach of its forces, synchronize

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[116] Robert Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," *Journal of Military History* 55 (January 1991): 34.

[117] Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," 24.

[118] Epstein, "The Creation and Evolution of the Army Corps in the American Civil War," 42-46.

[119] Department of the Army, *Field Manual 3-0 Operations* (Washington, DC: Government Printing Office, 2008), C-2.

operations, and prioritizes and allocates resources.[120] Corps continued to fill roles such as a land component headquarters, a joint task force for contingencies, or as an intermediate tactical headquarters.[121] Therefore, it has the ability to operate at either the tactical or operational level of war.

Corps required augmentation in order to fulfill its assigned roles in any type of operation. The augmentation comes from division headquarters, brigade combat teams, and support brigades to provide the corps with capabilities once organic. In corps reconnaissance and security capability, transformation eliminated the armored cavalry regiment. Furthermore, it hampered the corps ability to train forces to execute reconnaissance and security. This issue was due to the corps headquarters lack of training and readiness authority over division headquarters, brigade combat teams, and supporting brigades under the Army force generation process.[122]

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[120] Department of the Army, *Field Manual 3-91 Corps Operations*, (Washington, DC: Government Printing Office, 2010), 3-2.

[121] Department of the Army, *Field Manual 3-91*, vii.

[122] Department of the Army, *Field Manual 3-91*, 1-1.

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